
SEMICONDUCTOR GENERAL CATALOG

半導体製品総覧表2019年1月版

Radio-Frequency Devices

高周波デバイス

Radio-Frequency MOSFETs / 高周波MOSFET

Radio-Frequency Bipolar Small-Signal Transistors / 高周波バイポーラ小信号トランジスタ

Radio-Frequency Diodes / 高周波ダイオード

Radio-Frequency MOSFETs / 高周波 MOSFET

Radio-Frequency Small-Signal MOSFETs / 高周波小信号 MOSFET

Part Number	Package	Applications	Electrical Characteristics (Ta = 25°C)					Marking	Equivalent Product (Leaded Type)
			V _{DS} (V)	I _D (mA)	P _D (mW)	I _{DSS} (mA)	Y _{fs} (mS) Typ.		
3SK291	 SMQ (mm)	UHF-band radio-frequency amps	12.5	30	150	0 to 0.1	26	UF	—
3SK292		VHF/UHF-band radio-frequency amps	12.5	30	150	0 to 0.1	23.5	UV	—
3SK293	 USQ (mm)	UHF-band radio-frequency amps	12.5	30	100	0 to 0.1	26	UF	—
3SK294		VHF/UHF-band radio-frequency amps	12.5	30	100	0 to 0.1	23.5	UV	—

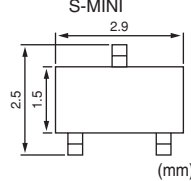
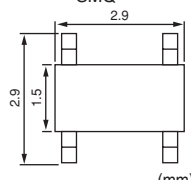
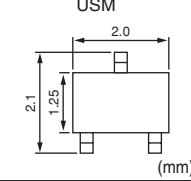
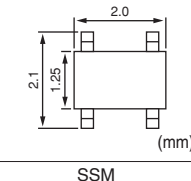
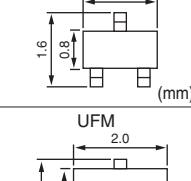
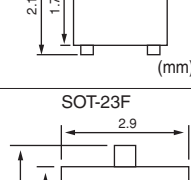
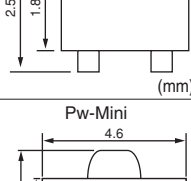
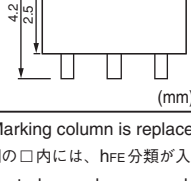
Radio-Frequency Power MOSFETs / 高周波パワー MOSFET

Part Number	Package	Applications	Absolute Maximum Ratings (Ta = 25°C)			Min	Po (W)		
			V _{DSS} (V)	P _D (W)	I _D (A)		Test Conditions		
							V _{DS} (V)	f (MHz)	P _i (W)
RFM08U9X	PW-X	UHF/VHF Professional radios	36	20	5	7.5	9.6	520	0.5
2SK3075	PW-X		30	20	5	7.5	9.6	520	0.5
2SK3074	PW-MINI		30	3	1	0.63	9.6	520	0.02
RFM12U7X	PW-X		20	20	4	11.5	7.2	520	1.0
RFM07U7X	PW-X		16	20	3	7.0	7.2	450 to 530	0.5
RFM06U3X *	PW-X		16	20	5	5.0	3.6	520	0.5
RFM01U7P	PW-MINI		20	3	1	1.0	7.2	520	0.1
2SK3476	PW-X		20	20	3	7.0	7.2	520	0.5
2SK3475	PW-MINI		20	3	1	0.63	7.2	520	0.02
RFM04U6P	PW-MINI	GMRS	16	7	2	3.5	6.0	470	0.2
2SK4037	PW-X		12	20	3	3.55	6.0	470	0.3
2SK2854	PW-MINI	UHF and VHF radio	10	0.5	0.5	0.2	6.0	849	0.02
2SK3079A	PW-X	FRS/GMRS	10	20	3	2.24	4.5	470	0.1
2SK3756	PW-MINI		7.5	3	1	1.26	4.5	470	0.1
2SK3078A	PW-MINI		10	3	0.5	0.63	4.5	470	0.1
2SK3078	PW-MINI		10	3	0.5	0.5	4.8	915	0.02
2SK3077	USQ	Driver	10	0.25	0.1	0.032	4.8	915	0.001
RFM03U3P	PW-MINI	GMRS	16	7	2.5	2.3	3.6	470	0.1
RFM00U7U	USQ	Driver	20	0.25	0.1	0.1	7.2	520	0.01

*: New product / 新製品

Radio-Frequency Bipolar Small-Signal Transistors / 高周波バイポーラ小信号トランジスタ

Radio-Frequency Bipolar Transistors / 高周波バイポーラトランジスタ

Part Number	Package	Applications	Absolute Maximum Ratings (Ta = 25°C)				Marking (1)	TO-92 Equivalent Product	Remarks
			V _{CEO} (V)	I _C (mA)	P _C (mW)	T _J (°C)			
2SC5064	S-MINI 	VHF/UHF-band low-noise amps	12	30	150	125	MA□	—	fr = 7 GHz
2SC5084		VHF/UHF-band low-noise amps	12	80	150	125	MC□	—	fr = 7 GHz
2SC5087	SMQ 	VHF/UHF-band low-noise amps	12	80	150	125	C□	—	fr = 7 GHz
2SC5087R		VHF/UHF-band low-noise amps	12	80	150	125	ZP	—	fr = 8 GHz
2SC5065	USM 	VHF/UHF-band low-noise amps	12	30	100	125	MA□	—	fr = 7 GHz
2SC5085		VHF/UHF-band low-noise amps	12	80	100	125	MC□	—	fr = 7 GHz
2SC5095		VHF/UHF-band low-noise amps	10	15	100	125	ME□	—	fr = 10 GHz
2SC5107		VHF/UHF-band oscillators	10	30	100	125	MF□	—	fr = 6 GHz
MT3S16U		UHF-band low-voltage oscillators and amps	5	60	100	125	T4	—	fr = 4 GHz
MT4S03BU	USQ 	VHF/UHF-band low-noise amps	5	40	175 (2)	150	MR	—	fr = 12 GHz
MT4S24U		VHF/UHF-band low-noise amps	5	50	175 (2)	150	R8	—	fr = 14.5 GHz
2SC4915	SSM 	FM-band radio-frequency amps	30	20	100	125	Q□	2SC1923	fr = 550 MHz
2SC5066		VHF/UHF-band low-noise amps	12	30	100	125	M1/M2	—	fr = 7 GHz
2SC5086		VHF/UHF-band low-noise amps	12	80	100	125	M5/M6	—	fr = 7 GHz
MT3S20TU	UFM 	VHF/UHF-band low-noise amps, low-distortion amps	12	80	900 (3)	150	MU	—	fr = 7 GHz
MT3S19R	SOT-23F 	VHF/UHF-band low-noise amps, low-distortion amps	6	80	320 (2)	150	T6	—	fr = 13.5 GHz
MT3S20R		VHF/UHF-band low-noise amps, low-distortion amps	12	80	320 (2)	150	MU	—	fr = 7.5 GHz
MT3S20P	Pw-Mini 	VHF/UHF-band low-noise amps, low-distortion amps	12	80	1800 (3)	150	MU	—	fr = 7 GHz

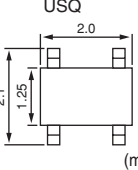
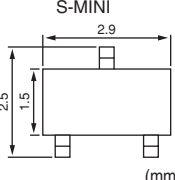
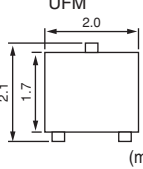
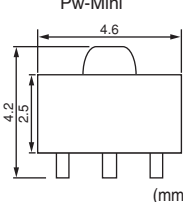
Note (1): □ in the Marking column is replaced by one of the following letters according to the hFE classification: R: Rank R, O: Rank O, Y: Rank Y /

現品表示欄の□内には、hFE分類が入ります。(Rランク→R、Oランク→O、Yランク→Y)

(2): When mounted on a glass-epoxy board / 基板実装時

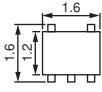
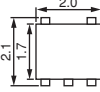
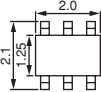



(3): When mounted on a ceramic board / セラミック基板実装時

SiGe HBTs / SiGe HBT

Part Number	Package	Applications	Absolute Maximum Ratings (Ta = 25°C)				Marking	Remarks
			V _{CEO} (V)	I _C (mA)	P _C (mW)	T _J (°C)		
MT4S300U	 <p>USQ 2.0 2.1 1.25 (mm)</p>	UHF/SHF-band low-noise amps	4	50	100	150	P3	f _T = 26.5 GHz, high ESD immunity
MT4S301U		UHF/SHF-band low-noise amps	4	35	100	150	P4	f _T = 27.5 GHz, high ESD immunity
MT3S111	 <p>S-MINI 2.9 2.5 1.5 (mm)</p>	VHF/UHF-band low-noise amps, low-distortion amps	6	100	700 ⁽¹⁾	150	R5	f _T = 11.5 GHz
MT3S113		VHF/UHF-band low-noise amps, low-distortion amps	5.3	100	800 ⁽¹⁾	150	R7	f _T = 12.5 GHz
MT3S111TU	 <p>UFM 2.0 2.1 1.7 (mm)</p>	VHF/UHF-band low-noise amps, low-distortion amps	6	100	800 ⁽¹⁾	150	R5	f _T = 10 GHz
MT3S113TU		VHF/UHF-band low-noise amps, low-distortion amps	5.3	100	900 ⁽¹⁾	150	R7	f _T = 11.2 GHz
MT3S111P	 <p>Pw-Mini 4.6 4.2 2.5 (mm)</p>	VHF/UHF-band low-noise amps, low-distortion amps	6	100	1000 ⁽¹⁾	150	R5	f _T = 8 GHz
MT3S113P		VHF/UHF-band low-noise amps, low-distortion amps	5.3	100	1600 ⁽¹⁾	150	R7	f _T = 7.7 GHz

Note (1): When mounted on a ceramic board / セラミック基盤実装時

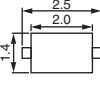






Small-Signal Schottky Barrier Diodes and Multiple Schottky Barrier Diodes / 小信号ショットキバリアダイオード, 複合ショットキバリアダイオード

Absolute Maximum Ratings		Electrical Characteristics (Ta = 25°C)					ESV	UFV	US6	Remarks
VR (V)	Io (mA)	VF (V)		@IF (mA)	IR (μA)		 (mm)	 (mm)	 (mm)	
		Typ.	Max		Max	@VR (V)				
30	1000	0.47	0.57	1000	50	30		CVJ10F30 	High current, single Improved VF and IR	
40	100	0.54	0.6	100	5	40	HN2S02JE 	HN2S02FU 	Standard, Independent diodes	

• The internal connection diagrams only show the general configurations of the circuits.

• 内部接続図はイメージ図です。

Small-Signal Schottky Barrier Diodes (Semi-Power Type) / 小信号ショットキバリアダイオード (セミパワータイプ)

Absolute Maximum Ratings		Electrical Characteristics (Ta = 25°C)					US2H	Remarks
VR (V)	Io (mA)	VF (V)		@IF (mA)	IR (μA)		 (mm)	
		Typ.	Max		Max	@VR (V)		
30	2000	0.40	0.47	2000	60	30	CUHS20F30 * 	High current, Low VF
	2000	0.34	0.41	2000	500	30	CUHS20S30 * 	High current, Very Low LF
40	1500	0.57	0.63	1500	50	40	CUHS15F40 * 	High current, Low VF
	2000	0.47	0.54	2000	60	40	CUHS20F40 * 	High current, Low VF
	2000	0.40	0.47	2000	300	40	CUHS20S40 * 	High current, Very Low VF
60	1000	0.56	0.62	1000	40	60	CUHS10F60 * 	High current, Low VF

*: New product / 新製品

Radio-Frequency Schottky Barrier Diodes/高周波用ショットキバリアダイオード

Part Number	Applications	VR • V _{RM} (V)	IF (mA)	VF(Typ.)		CT(Typ.)		Package
				(V)	IF (mA)	(pF)	VR (V)	
1SS154	VHF to S band mixer	6	30	0.5	10	0.8	0	S-Mini (Single)
1SS271		6	30	0.5	10	0.8	0	S-Mini (Twin)
1SS295	UHF MIXER	4	30	0.25	2	0.6	0.2	S-Mini (Twin)
1SS315		♣5	30	0.25	2	0.6	0.2	USC
JDH2S01FS		4	25	0.25	2	0.6	0.2	fSC
JDH3D01S		4	25	0.25	2	0.6	0.2	SSM (Twin)
JDH3D01FV		4	25	0.25	2	0.6	0.2	VESM (Twin)
JDH2S02FS		10	10	0.24	1	0.3	0.2	fSC
JDH2S02SC		10	10	0.24	1	0.25	0.2	SC2
JDH2S02SL		10	10	0.24	1	0.25	0.2	SL2

Variable Capacitance Diodes / 可変容量ダイオード

Variable Capacitance Diodes / 可変容量ダイオード

(Diodes for Electronic Tuning) / (電子同調用)

Part Number	Package	V_R (V)	C_T (pF)	V_R (V)	C_T (pF)	V_R (V)	Applications
1SV228		15	28.5 to 32.5	3	11.7 to 13.7	8	FM car radios, portable radios

Part Number			V_R (V)	C_T (pF)	V_R (V)	C_T (pF)	V_R (V)	Applications
Package								
1SV324	1SV325		10	44 to 49.5	1	9.2 to 12.0	4	VCXO
	JDV2S36E		10	44 to 49.5	1	5.4 to 7.3	6	VCXO
1SV262	1SV282		34	33 to 38	2	2.6 to 3.0	25	CATV tuners
1SV322	1SV323		10	26.5 to 29.5	1	6 to 7.1	4	VCXO
1SV304	1SV305		10	17.3 to 19.3	1	5.3 to 6.6	4	VHF/UHF VCO
1SV270	1SV281		10	15 to 17	1	7.3 to 8.7	4	VHF/UHF VCO
1SV229	1SV279	JDV2S41FS	15	14 to 16	2	5.5 to 6.5	10	VHF/UHF VCO
1SV310	1SV311	JDV2S09FS	10	9.7 to 11.1	1	4.45 to 5.45	4	VHF/UHF VCO
	1SV314	JDV2S10FS	10	7.3 to 8.4	0.5	2.75 to 3.4	2.5	VHF/UHF VCO
1SV277	1SV285	JDV2S07FS	10	4.0 to 4.9	1	1.85 to 2.35	4	VHF/UHF VCO
1SV239	1SV280		15	3.8 to 4.7	2	1.5 to 2.0	10	L Band VCO

Radio-Frequency Switching Diodes / 高周波スイッチ用ダイオード

Radio-Frequency Switching Diodes / 高周波スイッチ用ダイオード

Part Number	Applications	V_R (V)	I_R (Max)		V_F (Max)		C_T (Typ.)		r_s (Typ.)			Package											
			(μ A)	V_R (V)	(V)	I_F (mA)	(pF)	V_R (V)	(Ω)	I_F (mA)	f (MHz)												
1SS314	TV band switch	30	0.1	15	0.85	2	0.7	6	0.5	2	100	USC											
1SS381												ESC											
1SS268												Twin	30	0.1	15	0.85	2	0.8	6	0.6	2	100	S-Mini
1SS269																							S-Mini
1SS312																							USM
1SS313																							USM
1SS364																							SSM
1SV128	Switch, ATT	50	0.1	50	0.95 (Typ.)	50	0.25	50	3	10	100	S-MINI											
JDP2S12CR												S-FLAT											
1SV307												Single	30	0.1	30	1.0	50	0.3	1	1	10	100	USC
1SV271																							USC
1SV308																							ESC
JDP2S04E																							ESC
JDP2S02AFS																							fSC
JDP2S02ACT																							CST2
JDP2S08SC												Switch	30	0.1	30	0.95	50	0.21	1	1	10	100	SC2
1SV172																							SC2
JDP3C02AU	Switch, ATT	50	0.1	50	0.95 (Typ.)	50	0.25	50	3	10	100	S-MINI											
JDP3C02AU	Twin											30	0.1	30	0.89 (Typ.)	50	0.28	1	1	10	100	USM	

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