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MMBR901

NPN Silicon

High-Frequency

Transistor

NOTE

inches mm

<u>.037</u> .950

Description

- High Current-Gain Bandwidth Products
- Low Noise Figure @ f=1.0GHz NF_(matched)=1.9dB (Typ)
- High Power Gain G_{pe(matched)}=12.0dB (Typ) @ f=1.0GHz
- Operating & Storage Temperature: -55°C to +150°C
- Marking Code: 7A

MAXIMUM RATINGS

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Rating	Symbol	Value		Unit	A
Collector-Emitter Voltage	V _{CEO}	15		Vdc	D
Collector-Base Voltage	V _{CBO}	25	,	Vdc	
Emitter-Base Voltage	V _{EBO}	2.0	,	Vdc	
Collector Current - Continuous	lc	30	n	nAdc	
Thermal Resistance, Junction to Case	R ₀ JC	250	c	°C/W	
Power Dissipation @ TC=75°C (1) Derate above 75°C	P _{D(max)}	0.300	1	Watt ₩/ºC	─ ● F ● ─ E ─ ●
Electrical Characteristics @ 25°C	Unless Otl	-			
Characteristics	Symbol	Min	Max	Unit	
OFF CHARACTERISTICS					Т−−− к −− −
Collector-Emitter Breakdown Voltage ($I_c = 1.0$ mAdc, $I_B = 0$)	V _{(BR)CEO}	15		Vdc	DIMENSIONS DIMENSIONS DIM MIN MAX MIN MAX
Collector-Base Breakdow n Voltage ($l_c = 0.1$ mAdc, $l_E = 0$)	V _{(BR)CBO}	25		Vdc	Divi Min Min Min Min A .110 .120 2.80 3. B .083 .098 2.10 2. C .047 .055 1.20 1.
Emitter-Base Breakdown Voltage ($I_E = 0.1 \text{mAdc}, I_C = 0$)	V _{(BR)EBO}	2.0		Vdc	D .035 .041 .89 1. E .070 .081 1.78 2. F .018 .024 .45 .6
Collector Cutoff Current ($V_{CB} = 15 \text{ Vdc}, I_E = 0$)	Ісво		50	NAdc	G .0005 .0039 .013 .1 H .035 .044 .89 1 J .003 .007 .085 .1
ON CHARACTERISTICS			-		<u>κ</u> .015 .020 .37 Suggested Solde
DC Current Gain (I _c = 5.0 mAdc, V _{ce} = 5.0 Vdc)	h _{FE}	50	200		Pad Layout
SMALL-SIGNAL CHARACTERISTICS				<u> </u>	
Output Capacitance $(V_{CB} = 10Vdc, I_c = 5.0 \text{ mAdc, } f = 1.0 \text{ GHz})$	Cobo		1.0	pF	
Common-Emitter Amplifier Gain ($V_{cc} = 6.0Vdc$, $I_c = 5.0 mAdc$, f = 1.0 GHz)	Gpe	1	2	dB	

Note: 1. Case temperature measured on collector lead immediately adjacent to body of package

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