

Electrical Characteristics at $T_A = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Collector-emitter breakdown voltage $I_C = 1\text{ mA}$, $I_B = 0$	$V_{(BR)CEO}$	12	-	-	V
Collector-emitter cutoff current $V_{CE} = 20\text{ V}$, $V_{BE} = 0$	I_{CES}	-	-	100	μA
Collector-base cutoff current $V_{CB} = 10\text{ V}$, $I_E = 0$	I_{CBO}	-	-	100	nA
Emitter-base cutoff current $V_{EB} = 1\text{ V}$, $I_C = 0$	I_{EBO}	-	-	1	μA
DC current gain $I_C = 15\text{ mA}$, $V_{CE} = 8\text{ V}$, pulse measured	h_{FE}	70	100	140	-

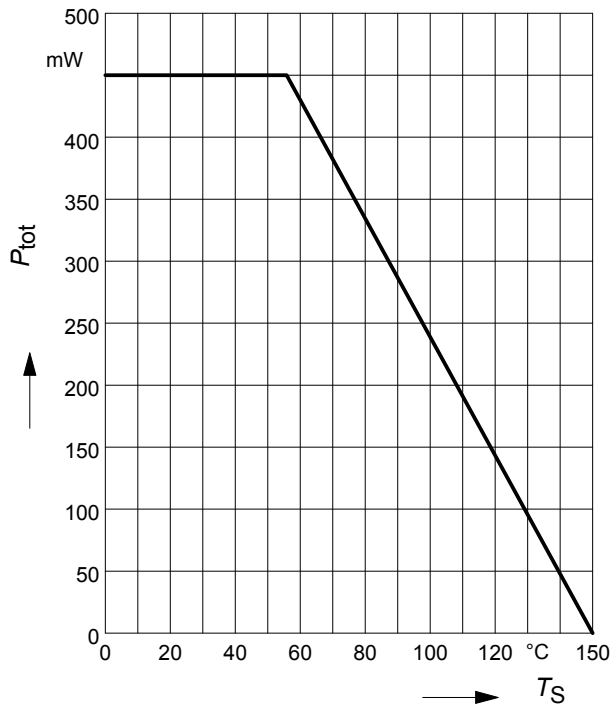
Electrical Characteristics at $T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
AC Characteristics (verified by random sampling)					
Transition frequency $I_C = 25\text{ mA}$, $V_{CE} = 8\text{ V}$, $f = 500\text{ MHz}$	f_T	6	8	-	GHz
Collector-base capacitance $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$, $V_{BE} = 0$, emitter grounded	C_{cb}	-	0.46	0.7	pF
Collector emitter capacitance $V_{CE} = 10\text{ V}$, $f = 1\text{ MHz}$, $V_{BE} = 0$, base grounded	C_{ce}	-	0.24	-	
Emitter-base capacitance $V_{EB} = 0.5\text{ V}$, $f = 1\text{ MHz}$, $V_{CB} = 0$, collector grounded	C_{eb}	-	1	-	
Minimum noise figure $I_C = 5\text{ mA}$, $V_{CE} = 8\text{ V}$, $Z_S = Z_{Sopt}$, $f = 900\text{ MHz}$ $I_C = 5\text{ mA}$, $V_{CE} = 8\text{ V}$, $Z_S = Z_{Sopt}$, $f = 1.8\text{ GHz}$	NF_{min}	- -	0.9 1.4	- -	dB
Power gain, maximum stable ¹⁾ $I_C = 15\text{ mA}$, $V_{CE} = 8\text{ V}$, $Z_S = Z_{Sopt}$, $Z_L = Z_{Lopt}$, $f = 900\text{ MHz}$	G_{ms}	-	18.5	-	dB
Power gain, maximum available ²⁾ $I_C = 15\text{ mA}$, $V_{CE} = 8\text{ V}$, $Z_S = Z_{Sopt}$, $Z_L = Z_{Lopt}$, $f = 1.8\text{ GHz}$	G_{ma}	-	12	-	dB
Transducer gain $I_C = 15\text{ mA}$, $V_{CE} = 8\text{ V}$, $Z_S = Z_L = 50\text{ }\Omega$, $f = 900\text{ MHz}$ $I_C = 15\text{ mA}$, $V_{CE} = 8\text{ V}$, $Z_S = Z_L = 50\text{ }\Omega$, $f = 1.8\text{ MHz}$	$ S_{21e} ^2$	- -	15 9.5	- -	dB

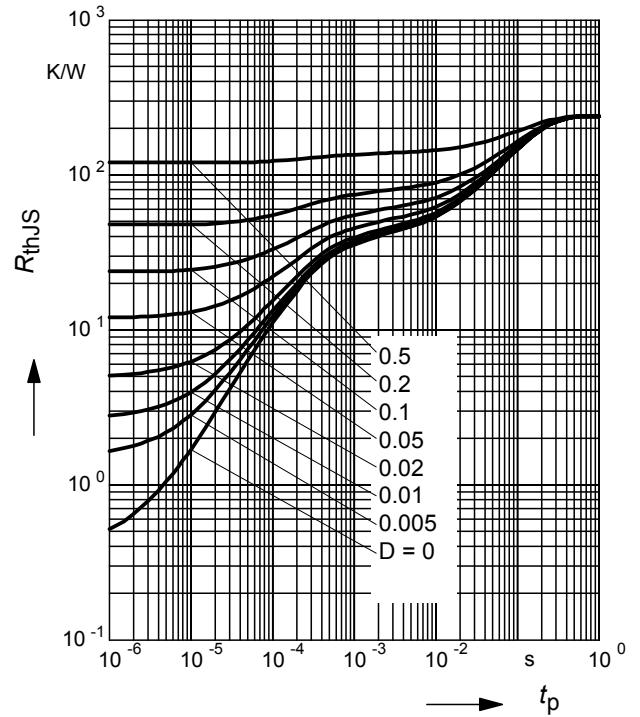
$$^1G_{ms} = |S_{21} / S_{12}|$$

$$^2G_{ma} = |S_{21e} / S_{12e}| (k - (k^2 - 1)^{1/2}),$$

Total power dissipation $P_{\text{tot}} = f(T_S)$

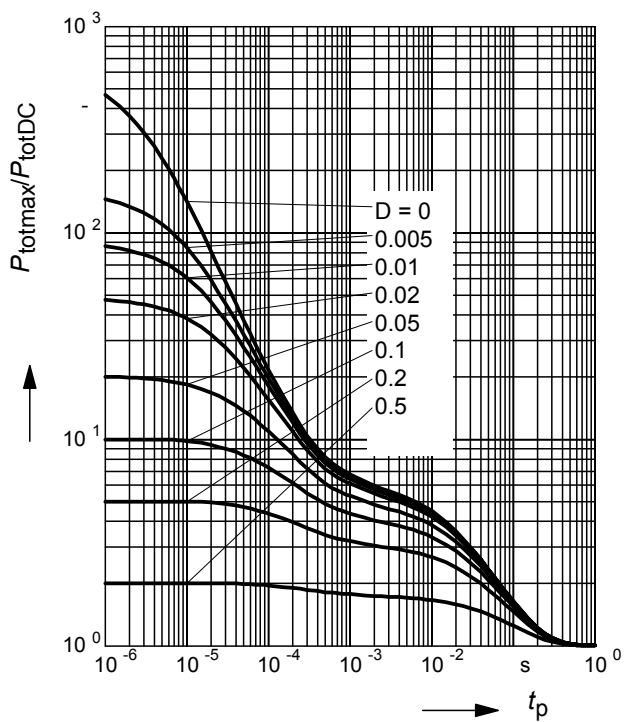


Permissible Pulse Load $R_{\text{thJS}} = f(t_p)$

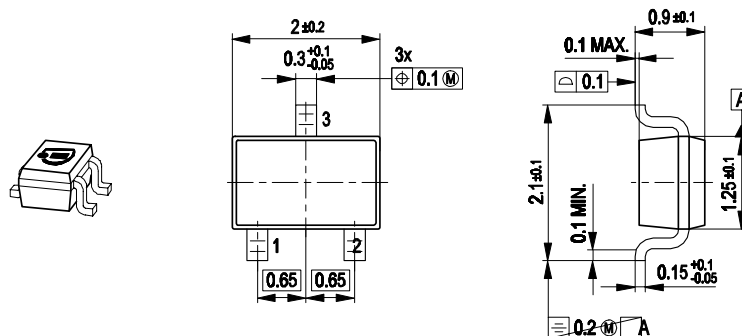


Permissible Pulse Load

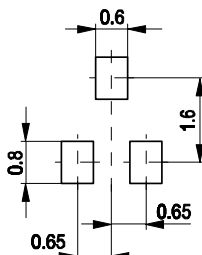
$P_{\text{totmax}}/P_{\text{totDC}} = f(t_p)$



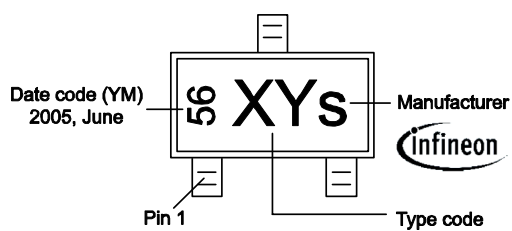
Package Outline



Foot Print

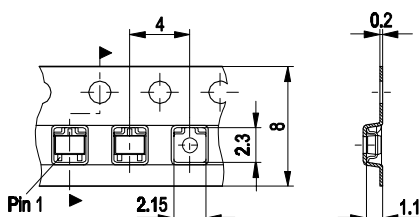


Marking Layout (Example)



Standard Packing

Reel ø180 mm = 3.000 Pieces/Reel
Reel ø330 mm = 10.000 Pieces/Reel



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