SYNTEZ MICROELECTRONICS

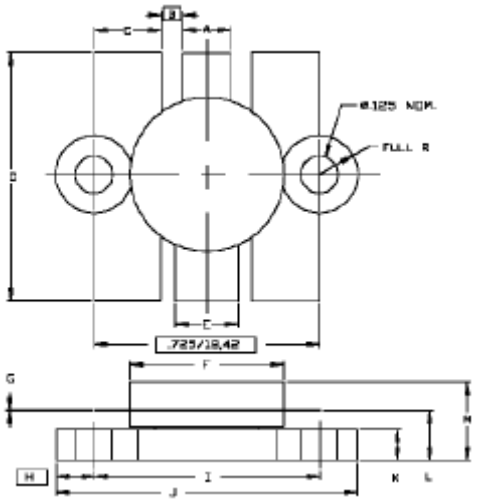
SD1480

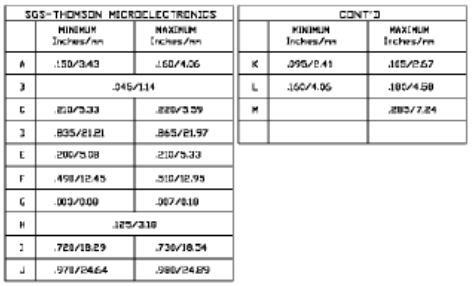
SILICON BIPOLAR NPN RF POWER TRANSISTOR

The silicon bipolar n-p-n transistor.
Common Emitter from 136 to 175 MHz Applications

Features:

- Gold metallization with barrier realizes very stable characteristics and excellent lifetime
- Diffused emitter ballast resistors
- Internal Input Matching
- Output power: 125 W
- Power gain: 9,2 dB





Absolute Maximum Ratings

Parameters	Sym	Value	Unit
Collector-base Voltage	V_{CBO}	65	V_{DC}
Emitter-Base Voltage	V_{EBO}	4.0	V_{DC}
Collector Current	I_C	20	A
Operation Junction Temperature	T_j	+200	°C
Power Dissipation	P_{DISS}	270	W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.65	°C/W
Storage Temperature Range	T_{STG}	+150	°C

Parameters

Parameter	Symbol	Min	Typ	Max	Unit
Collector–Emitter Breakdown Voltage (I_C = 40 mA_{DC}, V_{BE} = 0)	$V_{(BR)CES}$	65	—	—	V_{DC}
Collector–Emitter Breakdown Voltage (I_C = 40 mA_{DC}, I_B = 0)	$V_{(BR)CEO}$	35	—	—	V_{DC}
Collector–Base Breakdown Voltage (I_C = 40 mA_{DC}, I_E = 0)	$V_{(BR)CBO}$	65	—	—	V_{DC}
Emitter–Base Breakdown Voltage (I_E = 10 mA_{DC}, I_C = 0)	$V_{(BR)EBO}$	4.0	—	—	V_{DC}
Collector– Emitter Cutoff Current (V_{CB} = 30 V_{DC}, I_E = 0)	I_{CES}	—	—	15.0	mA_{DC}
Output Capacitance (V_{CB} = 28 Vdc, I_E = 0, f = 1.0 MHz)	C_{OB}	—	—	250	pF
Power Gain (V_{CE} = 28 V, P_{OUT} = 125 W, f = 175 MHz)	Gp	9.2	—	—	dB
Collector Efficiency (V_{CE} = 28 V, P_{OUT} = 125 W, f = 175 MHz)	η	55	—	—	%

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