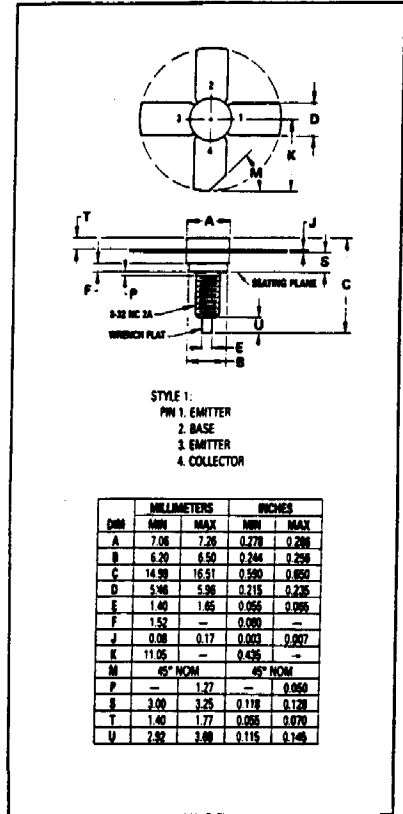


MRF654

MAXIMUM RATINGS			
Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CE0}	16	Vdc
Collector-Base Voltage	V_{CB0}	36	Vdc
Emitter-Base Voltage	V_{EB0}	4.0	Vdc
Collector-Current — Continuous	I_C	4.0	Adc
Total Device Dissipation (at $T_A = 25^\circ\text{C}$ Derate above 25°C)	P_D	44 0.25	Watts W/°C
Storage Temperature Range	T_{stg}	-65 to +150	°C

THERMAL CHARACTERISTICS			
Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	4.0	°C/W



ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage ($I_C = 25\text{ mAdc}$, $I_B = 0$)	$V_{(BR)CEO}$	16	—	—	Vdc
Collector-Emitter Breakdown Voltage ($I_C = 25\text{ mAdc}$, $V_{BE} = 0$)	$V_{(BR)CES}$	36	—	—	Vdc
Emitter-Base Breakdown Voltage ($I_E = 5.0\text{ mAdc}$, $I_C = 0$)	$V_{(BR)EBO}$	4.0	—	—	Vdc
Collector-Cutoff Current ($V_{CE} = 15\text{ Vdc}$, $V_{BE} = 0$)	I_{CES}	—	—	2.0	mA
ON CHARACTERISTICS					
DC Current Gain ($I_C = 1.0\text{ Adc}$, $V_{CE} = 5.0\text{ Vdc}$)	h_{FE}	20	—	120	—
DYNAMIC CHARACTERISTICS					
Output Capacitance ($V_{CB} = 15\text{ Vdc}$, $I_E = 0$, $f = 1.0\text{ MHz}$)	C_{ob}	—	31	45	pF
FUNCTIONAL TESTS					
Common-Emitter Amplifier Power Gain ($V_{CC} = 12.5\text{ Vdc}$, $P_{out} = 15\text{ W}$, $f = 512\text{ MHz}$)	G_{pe}	7.8	8.8	—	dB
Collector Efficiency ($V_{CC} = 12.5\text{ Vdc}$, $P_{out} = 15\text{ W}$, $f = 512\text{ MHz}$)	η	55	63	—	%
Load Mismatch Stress ($V_{CC} = 15.5\text{ Vdc}$, $f = 470\text{ MHz}$, 2.0 dB Overdrive, VSWR = 20:1 All Phase Angles)	ψ	No Degradation in Output Power			