

2N4012

High-Power Silicon N-P-N Transistor

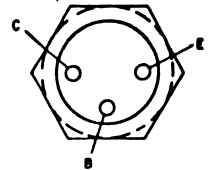
MAXIMUM RATINGS, Absolute-Maximum Values:

COLLECTOR-TO-EMITTER VOLTAGE:			
With base open	V _{CEO}	40	V
With V _{BE} = -1.5 volts	V _{CEV}	65	V
COLLECTOR-TO-BASE VOLTAGE	V _{CBO}	65	V
EMITTER-TO-BASE VOLTAGE	V _{EBO}	4	V
COLLECTOR CURRENT	I _C	1.5	A

TRANSISTOR DISSIPATION:

At case temperatures up to 25°C ...	P _T	11.6	W
At case temperatures above 25°C ...		See Fig. 5	
TEMPERATURE RANGE:			
Storage & Operating (Junction)		-65 to +200	°C
LEAD TEMPERATURE (During soldering):			
At distances ≥ 1/32 in. (0.8 mm) from insulating wafer for 10 s max.		230	°C

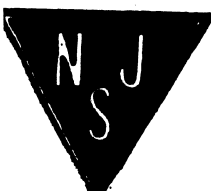
TERMINAL DESIGNATIONS



JEDEC TO-18

ELECTRICAL CHARACTERISTICS, Case Temperature = 25°C

CHARACTERISTIC	SYMBOL	TEST CONDITIONS						LIMITS		UNITS
		DC Collector Volts		DC Base Volts		DC Current (Milliamperes)		Min.	Max.	
		V _{CB}	V _{CE}	V _{BE}	I _E	I _B	I _C			
Collector-Cutoff Current	I _{CEO}		30			0		-	0.1	mA
Collector-to-Base Breakdown Voltage	BV _{CBO}				0		0.1	65	-	volts
Collector-to-Emitter Breakdown Voltage	BV _{CEO}					0	0 to 200	40	-	volts
	BV _{CEV}			-1.5			0 to 200	65	-	volts
Emitter-to-Base Breakdown Voltage	BV _{EBO}				0.1		0	4	-	volts
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}					100	500	-	1	volt
Collector-to-Base Capacitance	C _{ob}	30			0			-	10	pF
RF Power Output	P _{OUT}		28					2.5		watts
Tripler At 1002 Mc/s Doubler At 800 Mc/s			28					3.0 (typ.)		
Gain-Bandwidth Product	f _T		28				150	600 (typ.)		Mc/s
Collector-to-Base Cutoff Frequency*	f _c		28				0	25 (typ.)		Gc/s



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