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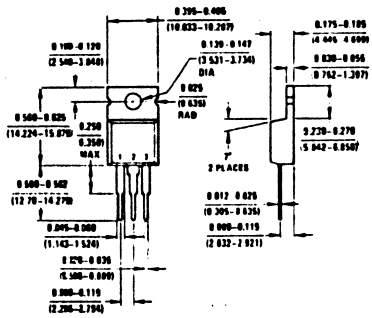
2N6134

50 WATT PNP SILICON POWER

ABSOLUTE MAXIMUM RATINGS (Note 1)

Maximum Temperatures	−65°C to +150°C
Storage Temperature	150°C
Operating Junction Temperature	235°C
Lead Temperature, (10 seconds)	
Maximum Power Dissipation (Note 2)	50 W
Total Power Dissipation at T_C = 25°C	0.4 W/°C
Linear Derating Factor	
Maximum Voltage and Currents	−80 V
V_{CEO} Collector to Emitter Voltage	−80 V
V_{CBO} Collector to Base Voltage	−5.0 V
V_{EBO} Emitter to Base Voltage	7.0 A
I_C Collector Current	3.0 A
I_B Base Current	

Physical Dimensions
TO-220



ELECTRICAL CHARACTERISTICS (25°C Case Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN.	MAX.	UNITS	TEST CONDITIONS
$V_{CEO(sus)}$	Collector Sustaining Voltage (Note 3)	−80		V	I_B = 0, I_C = 100 mA
h_{FE}	DC Current Gain (Note 3)	5.0			V_{CE} = −4.0 V, I_C = 7.0 A
		20	100		V_{CE} = −4.0V, I_C = 2.5 A
$V_{CE(sat)}$	Collector Saturation Voltage (Note 3)		−1.8	V	I_C = 7.0 A, I_B = 3.0 A
$V_{BE(ON)}$	Base to Emitter "On" Voltage (Note 3)		−2.0	V	I_C = 2.5 A, V_{CE} = −4.0 V
$\|h_{fe}\|$	Magnitude of Common Emitter Small Signal Current Gain	2.5			V_{CE} = −4.0 V, I_C = 1.0 A, f = 1.0 MHz
I_{CEX}	Collector Cutoff Current		2.0	mA	V_{CE} = Rated LV_{CFO}, V_{EB} = −1.5V, T_C = 125°C
			0.2	mA	V_{CE} = Rated LV_{CEO}, V_{EB} = −1.5V,
I_{EBO}	Emitter Cutoff Current		1.0	mA	V_{EB} = −5.0 V
I_{CBO}	Collector Cutoff Current, Emitter Open		0.5	mA	V_{CB} = Rated LV_{CEO}, I_E = 0
I_{CEO}	Collector Cutoff Current, Base Open		2.0	mA	V_{CE} = Rated LV_{CEO}, I_B = 0
h_{fe}	Small Signal Current Gain	25			V_{CE} = −4.0 V, I_C = 0.1 A, f = 1.0 kHz

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ELECTRICAL SPECIFICATIONS

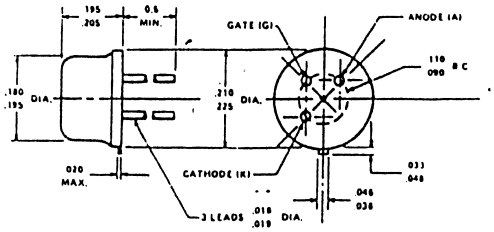
Test	Symbol	Fig.	2N6119		2N6120		Units	Test Conditions
			Min.	Max.	Min.	Max.		
Peak Current	I_P	1	–	5	–	1.0	μA	R_G = 10k, V_S = 10V
			–	2	–	0.15	μA	R_G = 1 Meg.
Valley Current	I_V	1	70	–	25	–	μA	R_G = 10k, V_S = 10V
			–	50	–	25	μA	R_G = 1 Meg.
			1.5	–	1.0	–	mA	R_G = 200Ω
Offset Voltage	V_T	1	0.2	0.6	0.2	0.6	V	R_G = 10k, V_S = 10V
			0.2	1.6	0.2	0.6	V	R_G = 1 Meg.
Gate-to-Anode Leakage	I_{GAO}	2	–	10	–	10	nA	T = 25°C, V_S = 40V
			–	100	–	100	nA	T = 75°C
Gate-to-Cathode Leakage	I_{GKS}	3	–	100	–	100	nA	V_S = 40V
Forward Voltage	V_F	4	–	1.0	–	1.0	V	I_F = 50mA
Pulse Output Voltage	V_O	5	9	–	9	–	V	
Pulse Output Rate of Rise	t_r	5	–	80	–	80	nsec	

MECHANICAL DATA

NOTE: Anode is connected to the case

CASE: Welded hermetic seal. Glass-to-metal matched seals between case and leads.

LEAD SOLDERING: Gold-plated leads may be soldered to within 1/16" of base. Heat sinking not required if temperature-time exposure is less than 230°C for 10 seconds.

MOUNTING POSITION: Can be mounted from any position.

TO-18