New Jersey Semi-Conductor Products, Inc.

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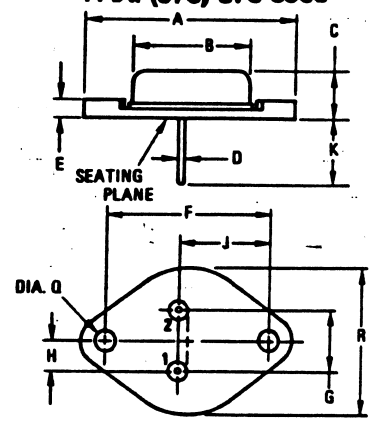
2N5613

7.5 AMPERE

POWER TRANSISTOR
PNP SILICON



STYLE 1:
PIN 1. BASE
2. EMITTER
CASE: COLLECTOR

NOTE:
1. DIM "Q" IS DIA.

MAXIMUM RATING

Rating	Symbol		Unit
Collector-Emitter Voltage	V_{CEO}	80	Vdc
Collector-Base Voltage	V_{CB}	100	Vdc
Emitter-Base Voltage	V_{EB}	10	Vdc
Collector Current-Continuous	I_C	7.5	Adc
Base Current - Continuous	I_B	4.0	Adc

DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	–	39.37	–	1.550
B	–	21.08	–	0.830
C	6.35	7.62	0.250	0.300
D	0.99	1.09	0.039	0.043
E	–	3.43	–	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.33	5.59	0.210	0.220
J	16.64	17.15	0.655	0.675
K	11.18	12.19	0.440	0.480
Q	3.84	4.09	0.151	0.161
R	–	26.67	–	1.050

Collector connected to case.

(TO-3)

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Emitter-Base Cutoff Current (V_{EB} = 10 Vdc)	I_{EBO}	–	–	0.25	mAdc
Collector-Emitter Cutoff Current (V_{CE} = 80 Vdc, V_{BE} = -1 Vdc)	I_{CEX}	–	–	0.1	mAdc
(V_{CE} = 80 Vdc, V_{BE} = -1 Vdc, T_C = 150°C)		–	–	1.0	
Collector-Emitter Cutoff Current (V_{CE} = 60 Vdc, I_B = 0)	I_{CEO}	–	–	1.0	mAdc
Collector-Base Breakdown Voltage (I_C = 1 mAdc, I_E = 0)	BV_{CBO}	100	–	–	Vdc
Collector-Emitter Sustaining Voltage (I_C = 100 mAdc, I_B = 0)	$V_{CEO(sus)}$	80	–	–	Vdc
DC Current Gain (I_C = 0.5 Adc, V_{CE} = 5 Vdc)	h_{FE}	20	45	–	–
		40	85	–	
(I_C = 5 Adc, V_{CE} = 5 Vdc)		40	75	120	
Collector-Emitter Saturation Voltage (I_C = 5 Adc, I_B = 0.5 Adc)	$V_{CE(sat)}$	–	0.8	1.5	Vdc
Base-Emitter Saturation Voltage (I_C = 5 Adc, I_B = 0.5 Adc)	$V_{BE(sat)}$	–	1.0	1.5	Vdc
Base-Emitter Voltage (I_C = 5 Adc, V_{CE} = 5 Vdc)	V_{BE}	–	1.0	1.4	Vdc
Small Signal Current Gain (V_{CE} = 10 Vdc, I_C = 0.5 Adc, f = 1 KHz)	h_{fe}	40	–	200	–
(V_{CE} = 10 Vdc, I_C = 0.5 Adc, f = 10 MHz)		1.0	1.6	–	
Common Base Output Capacitance (V_{CB} = 10 Vdc, f = 0.1 MHz)	C_{ob}	–	260	400	pf
Switching Times (V_{CC} = 25 Vdc, R_L = 5 ohms, I_C = 5 A, I_{B1} = I_{B2} = 0.5 A)				–	μs
Delay Time plus Rise Time	$t_d + t_r$	–	0.15	0.35	
Storage Time	t_s	–	0.9	2.0	
Fall Time	t_f	–	0.15	0.35	

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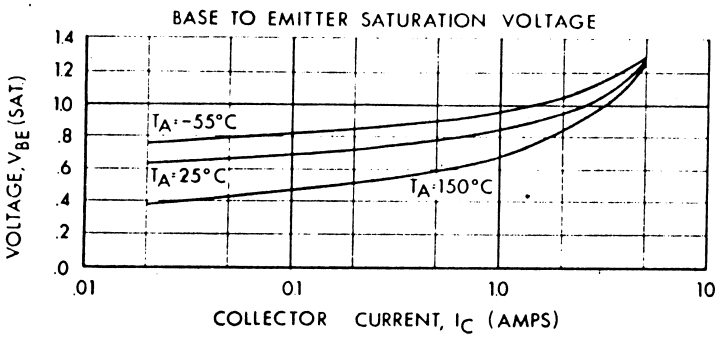
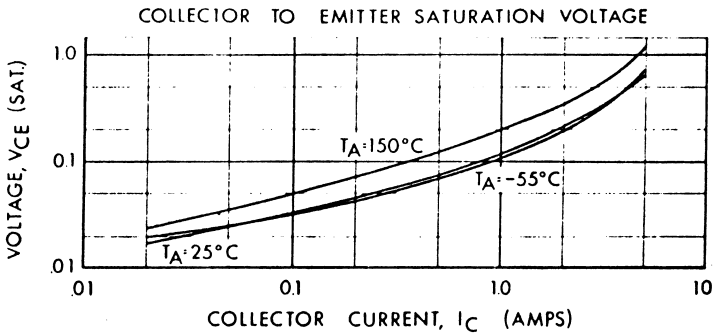
SILICON PNP TRANSISTOR (5 Amp)

TYPE NUMBER	CASE SIZE	BREAKDOWN VOLTAGES V_{CB}	V_{CE}	V_{EB}	h_{FE} @ V_{CE}	@ I_C A	Min.	Max.	CUTOFF CURRENT @ V_{CB}	(μA)
2N5611	TO-66	—120	—100	—5.5	—5.0	—2.5	30	90	—120	—1.0 ma





PACKAGE DIMENSIONS