

SWITCHMODE SERIES NPN POWER TRANSISTORS

... designed for use in high-voltage, high-speed, power switching in inductive circuit, and switchmode applications such as switching regulator's, converters.

FEATURES:

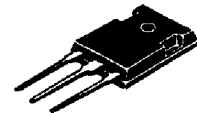
- *Collector-Emitter Sustaining Voltage-
 $V_{CE(sus)} = 400 \text{ V (Min)}$
- * Collector-Emitter Saturation Voltage -
 $V_{CE(sat)} = 1.2 \text{ V (Max.) @ } I_C = 4.0 \text{ A, } I_B = 0.8 \text{ A}$
- * Switching Time - $t_f = 1.0 \text{ us (Max.) @ } I_C = 5.0 \text{ A}$

**NPN
2SC2625**

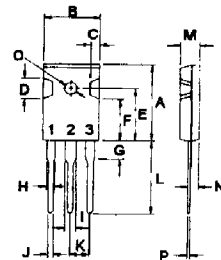
**10 AMPERE
SILICON POWER
TRANSISTORS
400 VOLTS
80 WATTS**

MAXIMUM RATINGS

Characteristic	Symbol	2SC2625	Unit
Collector-Emitter Voltage	V_{CEO}	400	V
Collector-Base Voltage	V_{CBO}	450	V
Emitter-Base Voltage	V_{EBO}	7.0	V
Collector Current - Continuous - Peak	I_C I_{CM}	10 20	A
Base current	I_B	3.0	A
Total Power Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	80 0.64	W W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$



TO-247(3P)



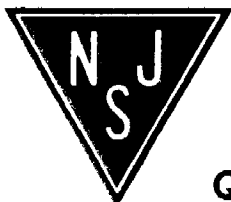
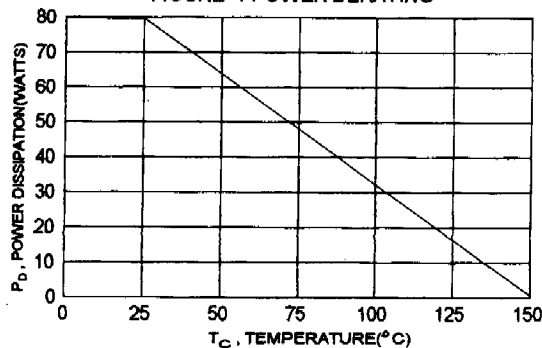
PIN 1.BASE
2.COLLECTOR
3.EMITTER

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction to Case	$R_{\theta jc}$	1.56	$^\circ\text{C/W}$

DIM	MILLIMETERS	
	MIN	MAX
A	20.63	22.38
B	15.38	16.20
C	1.90	2.70
D	5.10	6.10
E	14.81	15.22
F	11.72	12.84
G	4.20	4.50
H	1.82	2.48
I	2.92	3.23
J	0.89	1.53
K	5.26	5.66
L	18.50	21.50
M	4.68	5.36
N	2.40	2.80
O	3.25	3.65
P	0.55	0.70

FIGURE -1 POWER DERATING



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

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

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C = 10 \text{ mA}, I_B = 0$)	$V_{(BR)CEO}$	400		V
Collector-Base Breakdown Voltage ($I_C = 1.0 \text{ mA}, I_E = 0$)	$V_{(BR)CBO}$	450		V
Collector Cutoff Current ($V_{CB} = 450 \text{ V}, I_E = 0$)	I_{CBO}		1.0	mA
Emitter Cutoff Current ($V_{EB} = 7.0 \text{ V}, I_C = 0$)	I_{EBO}		100	μA

ON CHARACTERISTICS (1)

DC Current Gain ($I_C = 4.0 \text{ A}, V_{CE} = 5.0 \text{ V}$)	hFE	10		
Collector-Emitter Saturation Voltage ($I_C = 4.0 \text{ A}, I_B = 800 \text{ mA}$)	$V_{CE(sat)}$		1.2	V
Base-Emitter Saturation Voltage ($I_C = 4.0 \text{ A}, I_B = 800 \text{ mA}$)	$V_{BE(sat)}$		1.5	V

SWITCHING CHARACTERISTICS

On Time	$V_{CC} = 150 \text{ V}, I_C = 5.0 \text{ A}$ $I_{B1} = -I_{B2} = 1.0 \text{ A}$ $R_L = 30 \text{ ohm}$	t_{on}	1.0	μs
Storage Time		t_s	2.5	μs
Fall Time		t_f	1.0	μs

(1) Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$