

REVISONS		DWG. NO. SPC-F006	Effective 7/8/02	DCP No. 1308			
DCP #	REV	DESCRIPTION	DATE	CHECKD	DATE	APPRVD	DATE
1975	A	RELEASED	1/21/04	JM	05/08/08	JN	05/06/08

Electrical Characteristics: (V_{CE} = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics (Note 2)						
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C = 100mA, I _E = 0	400	-	-	V
		I _C = 8A, V _{CE} = 450V, f _T = +100°C	450	-	-	V
		I _C = 15A, V _{CE} = 300V, f _T = +100°C	300	-	-	V
Collector Cutoff Current	I _{CE0}	V _{CE} = 830V, V _{BE} = 0	-	-	1	mA
		V _{CE} = 830V, V _{BE} = 0, I _B = 1.5V	-	-	4	mA
		V _{CE} = 850V, I _C = 50	-	-	5	mA
		Omni, T _C = +100°C	-	-	1	mA
Second Breakdown						
Second Breakdown Collector Current with Base Forward Biased	I _{CSM}	V _{CE} = 100V, f = 10s (non-repetitive)	0.2	-	-	A
ON Characteristics (Note 2)						
DC Current Gain	h _{FE}	I _C = 5A, V _{CE} = 2V	12	-	60	
		I _C = 10A, V _{CE} = 2V	6	-	30	
		I _C = 10A, V _{CE} = 2A	-	-	1.5	V
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C = 15A, I _B = 3A	-	-	5	V
		I _C = 10A, I _B = 2A	-	-	1.6	V
		I _C = 10A, I _B = 2A, T _C = +100°C	-	-	2.5	V
Dynamic Characteristics						
Current Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _C = 500mA, f = 10MHz	6	-	28	MHz
		V _{CE} = 10V, I _C = 0.1, f = 1.0MHz	125	-	500	pF
Switching Characteristics (Resistive Load)						
Delay Time	t _d	V _{CE} = 250V, I _C = 10A, I _B = 2A	-	-	0.05	µs
		I _C = 100µs, Duty Cycle <= 2%	-	-	1	µs
Rise Time	t _r	-	-	-	4	µs
Fall Time	t _f	-	-	-	0.7	µs
Switching Characteristics (Inductive Load, Clamped)						
Storage Time	t _s	V _{CE} = 10A/6A, V _{CE} = 450V, I _C = 2A	-	-	2	µs
		V _{CE} = 5V, I _C = 5V	-	-	0.09	µs
Fall Time	t _f	V _{CE} = 10A/6A, V _{CE} = 450V, I _C = 2A	-	-	5	µs
		V _{CE} = 5V, I _C = +100°C	-	-	1.5	µs

Note 2: Pulse Test: Pulse Width = 300µs, Duty Cycle <= 2%.

DISCLAIMER:
ALL STATEMENTS AND TECHNICAL INFORMATION CONTAINED HEREIN ARE BASED UPON INFORMATION AND/OR TESTS WE BELIEVE TO BE ACCURATE AND RELIABLE. SINCE CONDITIONS OF USE ARE BEYOND OUR CONTROL, THE USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR THE INTENDED USE AND ASSUME ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION THEREWITH.

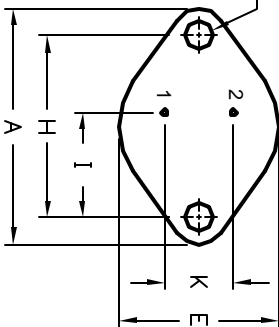
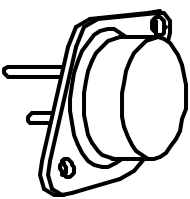
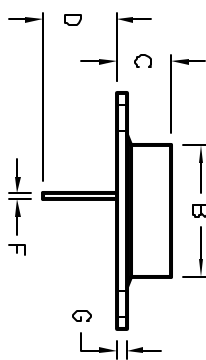
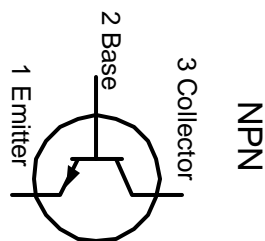
TOLERANCES:
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.

DIM	MIN	MAX
A	38.75	39.96
B	19.28	22.23
C	7.96	9.28
D	11.18	12.19
E	25.20	26.67
F	0.92	1.09
G	1.38	1.62
H	29.90	30.40
I	16.64	17.30
J	3.88	4.36
K	10.67	11.18

Absolute Maximum Ratings:

Collector-Emitter Voltage, V_{CE(ONS)} = 400V
 Collector-Emitter Voltage, V_{CE(XONS)} = 450V
 Collector-Emitter Voltage, V_{CEV} = 850V
 Emitter-Base Voltage, V_{EB} = 9V
 Collector Current, I_C = 15A
 Continuous
 Peak (Note 1) = 30A
 Base Current, I_B = 10A
 Continuous
 Peak (Note 1) = 20A

Total Device Dissipation (T_C = +25°C), P_D = 175W
 Derate above 25°C = 1.0W/°C
 Total Device Dissipation (T_C = +100°C), P_D = 100W
 Operating Junction Temperature Range, T_J = -65° to +200°C
 Storage Temperature Range, T_{stg} = -65° to +200°C
 Thermal Resistance, Junction-to-Case, R_{thJC} = 1.0°C/W
 Maximum Lead Temperature
 (During Soldering, 1/8" from case, 5sec), T_L = +275°C
 Note 1. Pulse Test: Pulse Width = 5ms, Duty Cycle <= 10%.



Description:

A silicon NPN transistor in a TO-3 type package designed for high voltage, high-speed, power switching in inductive circuits where fall time is critical. This device is particularly suited for 115V and 220V time-operated switch-mode applications.

- Applications:**
- Switching Regulators
 - PWM Inverters and Motor Controls
 - Deflection Circuits
 - Solenoid and Relay Drivers

DRAWN BY:	DATE:	DRAWING TITLE:	SCALE:	SHEET:
JEFF MCVICHER	1/21/04	Transistor, Bipolar, Metal, TO-3, NPN	NTS	1 OF 1
CHECKED BY:	DATE:	SIZE	DWG. NO.	ELECTRONIC FILE
Jason Nash	05/06/08	A	2N6547	35C0741.DWG
APPROVED BY:	DATE:			
Jason Nash	05/06/08			