MOSPEC

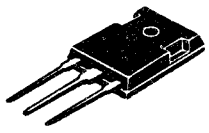
SWITCHMODE SERIES
NPN SILICON POWER DARLINGTON TRANSISTOR

The BU826 darlington transistors is designed for high-voltage, high-speed, power switching in inductive circuits where fall time is critical.They are particularly suited for line operated switchmode applications such as:

FEATURES:
*Continuous Collector Current - I_C = 6 A
*Switching Regulators
*Inverters
*Solenoid and Relay Drivers

NPN
BU826

6 AMPERE
POWER DARLINGTON
TRANSISTORS
375 VOLTS
125 WATTS



TO-247(3P)

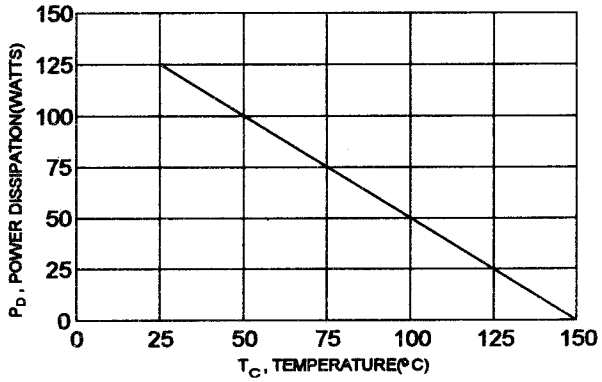
MAXIMUM RATINGS

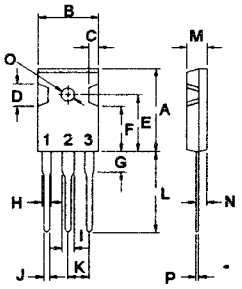
Characteristic	Symbol	BU826	Unit
Collector-Emitter Voltage (V_{BE}= 0)	V_{CES}	800	V
Collector-Emitter Voltage	V_{CEO}	375	V
Emitter-Base Voltage	V_{EBO}	8	V
Collector Current-Continuous -Peak	I_C I_{CM}	6 8	A
Base current	I_B	0.5	A
Total Power Dissipation @T_C=25°C Derate above 25°C	P_D	125 1.0	W W/°C
Operating and Storage Junction Temperature Range	T_J , T_{STG}	- 65 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction to Case	Rθjc	1.0	°C/W

FIGURE -1 POWER DERATING





PIN 1.BASE
2.COLLECTOR
3.EMITTER

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	2.46
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

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector - Emitter Sustaining Voltage (I_C = 100 mA, I_B = 0, L=25 mH, V_{clamp}=Rate V_{CEO})	$V_{CEO(SUS)}$	375		V
Collector Cutoff Current (V_{CE}= Rated V_{CES}, R_{BE}=0) (V_{CE}= Rated V_{CES}, R_{BE}=0,T_J=125°C)	I_{CES}		1.0 2.0	mA
Emitter Cutoff Current (V_{EB} = 8.0 V , I_C = 0)	I_{EBO}		150	mA
ON CHARACTERISTICS (1)				
Collector - Emitter Saturation Voltage (I_C = 2.5 A , I_B = 55 mA) (I_C = 4.0 A, I_B = 200 mA)	$V_{CE(sat)}$		2.0 2.5	V
Base - Emitter Saturation Voltage (I_C = 2.5 A, I_B = 55 mA)	$V_{BE(sat)}$		2.2	V
SWITCHING CHARACTERISTICS				
Turn-on Time	V_{CC} = 250 V, I_C = 2.5 A I_{Bon} = 55 mA, $I_{B(off)}$ = -1.0 A tp = 20us, Duty Cycle ≦ 1%	t_d	1.6	us
Storage Time		t_s	3.1	us
Fall Time		t_f	1.2	us

(1) Pulse Test: Pulse width = 300 us , Duty Cycle ≦ 2.0%