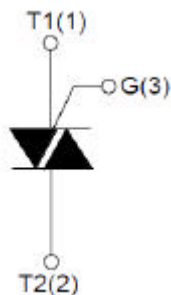
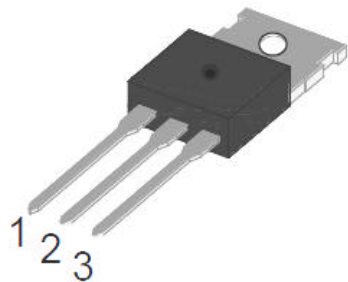


8A TRIAC



BT137- 600D

TO-220
Plastic Package

For use in General Purpose Bidirectional Switching and Phase Control Applications

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Repetitive Peak Off-State Voltage (T _j =25°C)	V _{DRM}	600	V
Repetitive Peak Reverse Voltage (T _j =25°C)	V _{RRM}	600	V
Non Repetitive Surge Peak Off-State Voltage	V _{DSM}	700	V
Non Repetitive Peak Reverse Voltage	V _{RSM}	700	V
RMS On-State Current	I _{T(RMS)}	8	A
Non Repetitive Surge Peak On-State Current (Full Cycle, f = 50MHz)	I _{TSM}	65	A
I ² t Value For Fusing (tp=10ms)	I ² t	21	A ² s
Critical Rate of Rise of On-State Current (I _G = 2 X I _{GT})	di/dt	50	A/μs
Peak Gate Current	I _{GM}	2	A
Average Gate Power Dissipation	P _{G(AV)}	0.5	W
Peak Gate Power	P _{GM}	5	W
Maximum Thermal Resistance Junction to case	R _{th(j-c)}	3	°C/W

ELECTRICAL CHARACTERISTICS (T_j = 25°C unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	QUADRANT	VALUE	UNIT
Gate Trigger Current	V _D =12V, R _L =30Ω	I _{GT}	I - II - III	<5	mA
			IV	<10	
Gate Trigger Voltage	V _D =12V, R _L =30Ω	V _{GT}	ALL	<1.5	V
Off-State Gate voltage	V _D =V _{DRM} , T _j =125°C, R _L = 3.3KΩ	V _{GD}	ALL	>0.2	V
Latching Current	I _G =1.2 X I _{GT}	I _L	I - III	<15	mA
			II - IV	<20	
Holding Current	I _T = 100mA	I _H		<10	mA
Critical Rate of Rise of Off-State Voltage	V _D = 2/3 V _{DRM} , Gate Open, T _j =125°C	dV/dt		>5	V/μs

STATIC CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
On-State Voltage	$I_{TM}=10A, t_p=380\mu s$	V_{TM}	<1.65	V
Off-State Leakage Current	$V_D=V_{DRM}, T_j=25^\circ C$	I_{DRM}	<5	μA
	$V_R=V_{RRM}, T_j=25^\circ C$	I_{RRM}	<5	
Off-State Leakage Current	$V_D=V_{DRM}, T_j=125^\circ C$	I_{DRM}	<1	mA
	$V_R=V_{RRM}, T_j=125^\circ C$	I_{RRM}	<1	

CHARACTERISTICS CURVES

FIG.1 Maximum power dissipation versus RMS on-state current

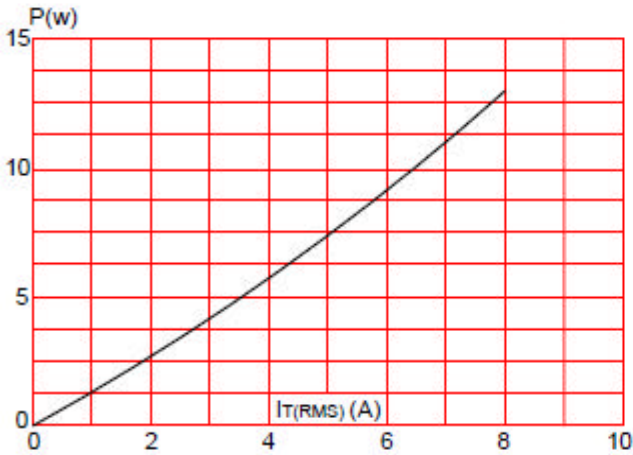


FIG.2: RMS on-state current versus case temperature

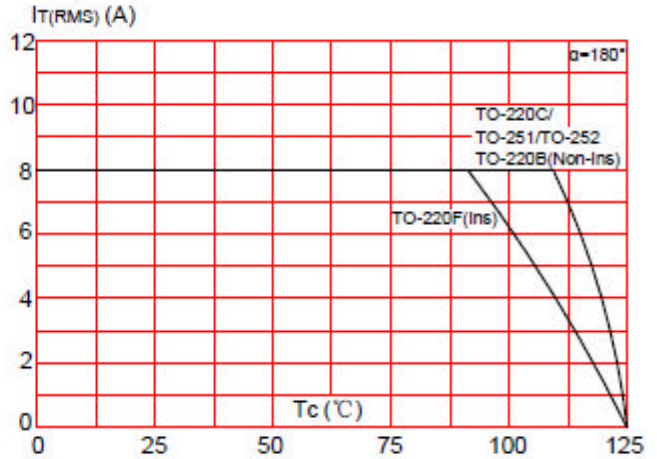


FIG.3: Surge peak on-state current versus number of cycles

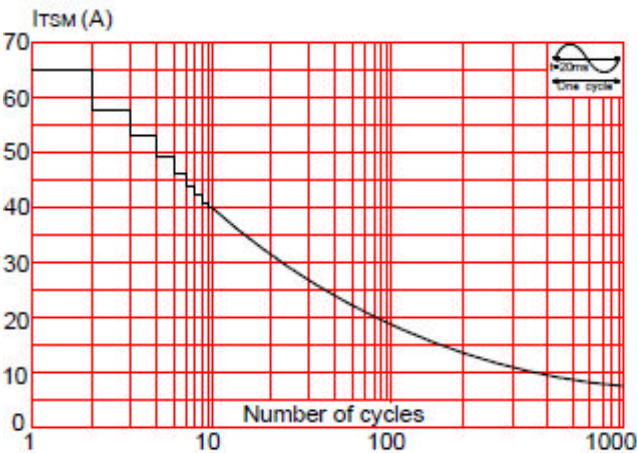


FIG.4: On-state characteristics (maximum values)

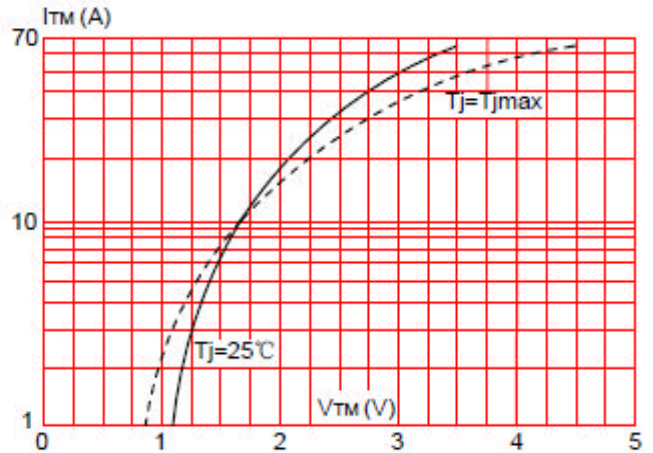


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of I^2t ($di/dt < 50\text{A}/\mu\text{s}$)

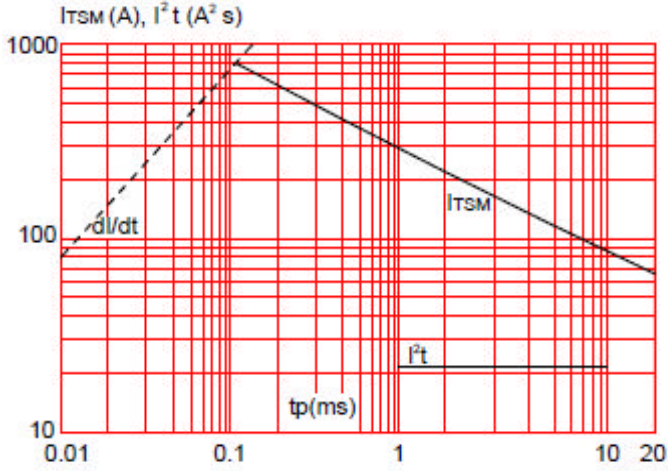


FIG.7: Relative variations of holding current versus junction temperature

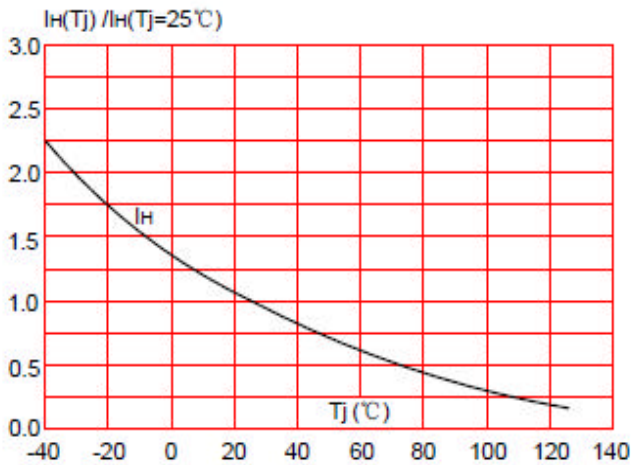


FIG.6: Relative variations of gate trigger current versus junction temperature

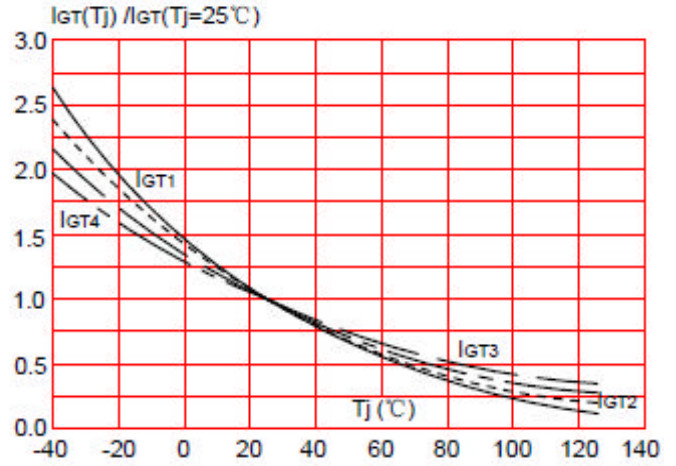
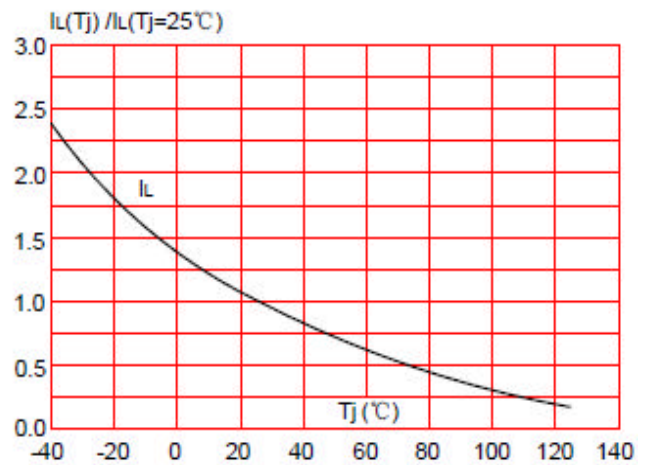
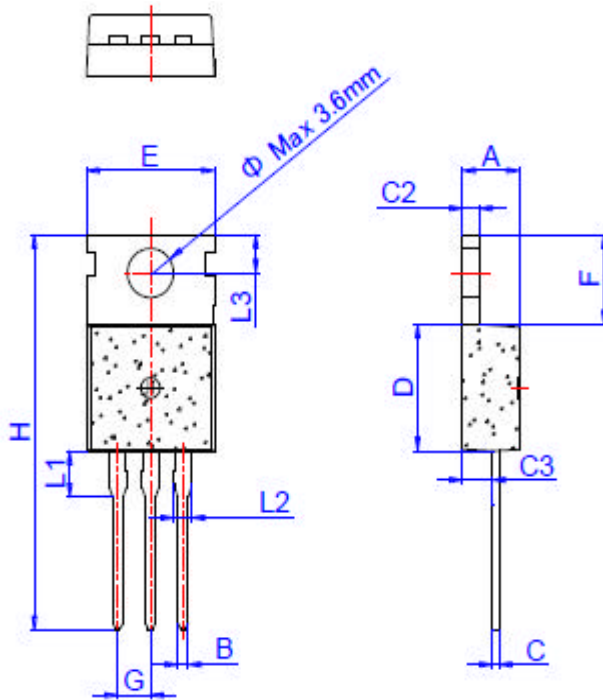


FIG.8: Relative variations of latching current versus junction temperature



PACKAGE OUTLINE AND DIMENSION



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.60	0.173		0.181
B	0.70		0.90	0.028		0.035
C			0.60	0.018		0.024
C2	1.23		1.32	0.048		0.052
C3	2.20		2.60	0.087		0.102
D	8.90		9.90	0.350		0.390
E	9.90		10.3	0.390		0.406
F	6.30		6.90	0.248		0.272
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.39			0.133	
L2	1.14		1.70	0.045		0.067
L3	2.65		2.95	0.104		0.116
Φ		3.6			0.142	



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Customer Notes

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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Continental Device India Pvt. Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.

Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119

email@cdil.com www.cdil.com

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