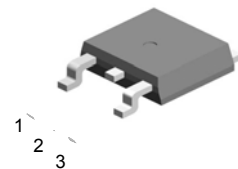


$$V_{\text{DRM}} = 600\text{V}$$

$$I_{\text{T(RMS)}} = 8\text{ A}$$

$$I_{\text{TSM}} = 65\text{A}$$

TO-252



Features

- ◆ Repetitive Peak Off-State Voltage : 600V
- ◆ R.M.S On-State Current ($I_{\text{T(RMS)}}$) = 8 A)
- ◆ High Commutation dv/dt

General Description

This device is fully isolated package suitable for AC switching application, phase control application such as fan speed and temperature modulation control, lighting control and static switching relay.

Absolute Maximum Ratings ($T_j = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Condition	Ratings	Units
V_{DRM}	Repetitive Peak Off-State Voltage	Since wave, 50 to 60Hz	600	V
$I_{\text{T(RMS)}}$	R.M.S On-State Current	$T_j = 125^\circ\text{C}$, Full Sine wave	8.0	A
I_{TSM}	Surge On-State Current	One Cycle, 50Hz/60Hz, Peak, Non-Repetitive	65	A
$P_{\text{G(AV)}}$	Average Gate Power Dissipation	$T_j = 125^\circ\text{C}$	1	W
I_{GM}	Peak Gate Current	$T_j = 125^\circ\text{C}$	2	A
T_j	Operating Junction Temperature		- 40 ~ 125	$^\circ\text{C}$
T_{STG}	Storage Temperature		- 40 ~ 150	$^\circ\text{C}$



TD8A60

Electrical Characteristics

Symbol	Items		Conditions	Ratings			Unit
				Min.	Typ.	Max.	
I_{DRM}	Repetitive Peak Off-State Current		$V_{\text{D}} = V_{\text{DRM}}$, Single Phase, Half Wave $T_{\text{J}} = 125\text{ }^{\circ}\text{C}$	—	—	1	mA
V_{TM}	Peak On-State Voltage		$I_{\text{TM}} = 8\text{ A}$, $T_{\text{P}}=380\mu\text{s}$	---	—	1.5	V
I_{GT1}^{+}	I	Gate Trigger Current	$V_{\text{D}} = 12\text{ V}$, $R_{\text{L}}=100\text{ }\Omega$	—	—	30	mA
I_{GT1}^{-}	II			—	—	30	
I_{GT3}^{-}	III			—	—	30	
V_{GT1}^{+}	I	Gate Trigger Voltage	$V_{\text{D}} =12\text{ V}$, $R_{\text{L}}=100\text{ }\Omega$	—	—	1.5	V
V_{GT1}	II			—	—	1.5	
V_{GT3}	III			—	—	1.5	
V_{GD}	Non-Trigger Gate Voltage		$T_{\text{J}}= 125\text{ }^{\circ}\text{C}$, $V_{\text{D}} = V_{\text{DRM}}$, $R_{\text{L}}=3.3\text{K }\Omega$	0.2	---	—	V
dv/dt	Critical Rate of Rise Off-State Voltage		$T_{\text{J}} = 125\text{ }^{\circ}\text{C}$, $V_{\text{D}}=2/3\text{ }V_{\text{DRM}}$	200	--	--	$\text{V}/\mu\text{s}$
I_{H}	Holding Current		$V_{\text{D}}=12\text{V}$, $I_{\text{GT}}=50\text{mA}$	--	--	50	mA



Fig 1. Gate Characteristics

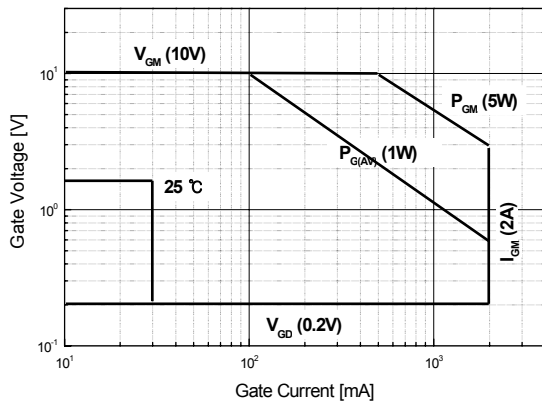


Fig 2. On-State Voltage

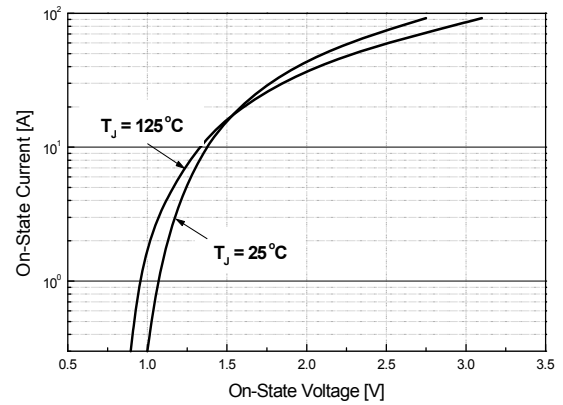


Fig 3. On State Current vs. Maximum Power Dissipation

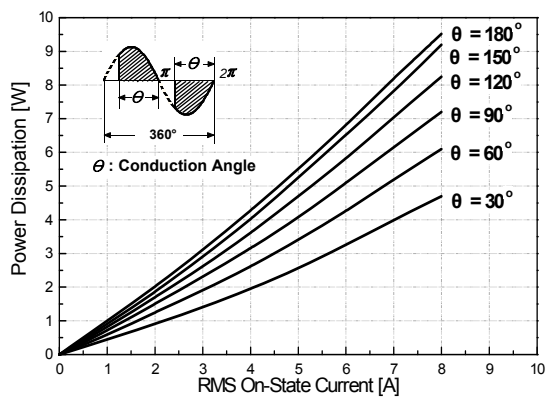


Fig 4. On State Current vs. Allowable Case Temperature

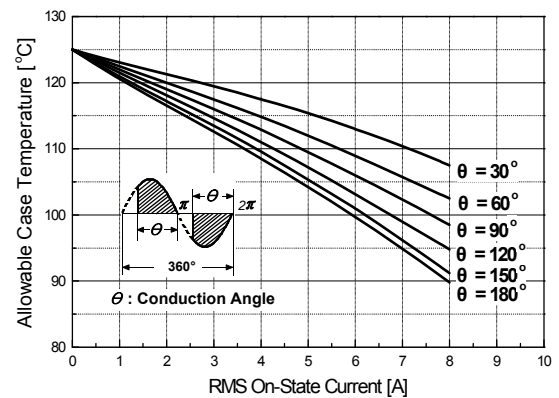


Fig 5. Surge On-State Current Rating (Non-Repetitive)

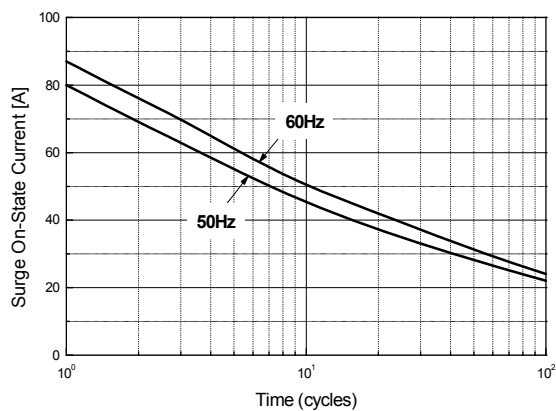


Fig 6. Gate Trigger Voltage vs. Junction Temperature

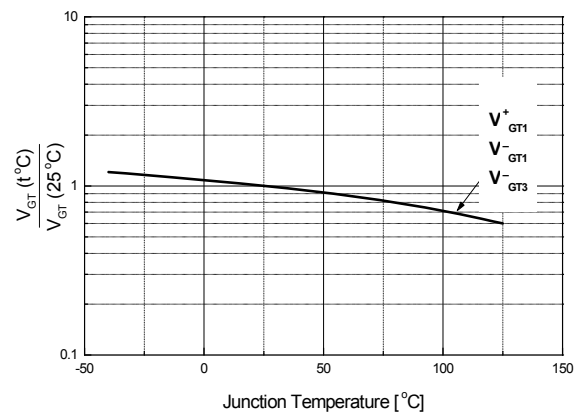




Fig 7. Gate Trigger Current vs. Junction Temperature

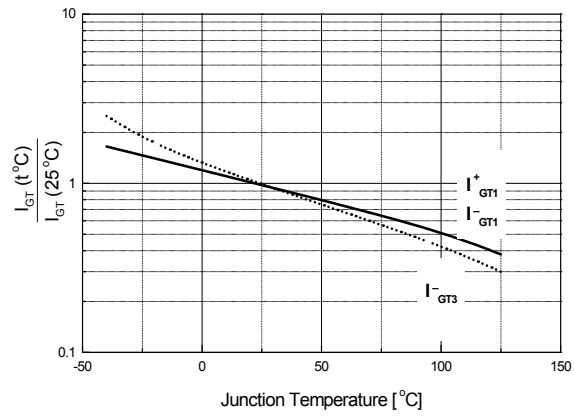
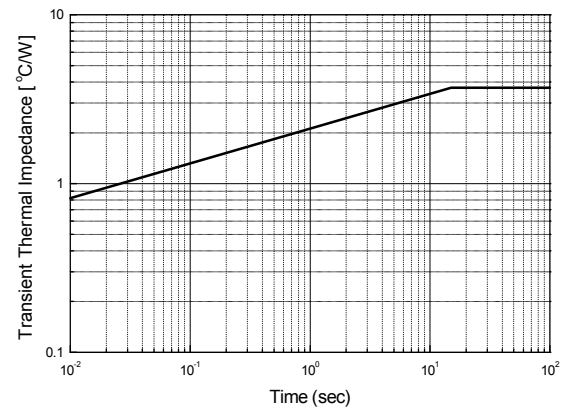


Fig 8. Transient Thermal Impedance





TO-252 Package Dimension

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.20	2.40	0.087	0.094
B	1.30	1.50	0.051	0.059
b	0.55	0.65	0.022	0.026
b1	0.46	0.56	0.018	0.022
C	0.46	0.56	0.018	0.022
D	6.40	6.60	0.252	0.260
D1	5.20	5.40	0.205	0.212
E	5.40	5.60	0.212	0.220
e1	2.25	2.35	0.089	0.093
e2	4.50	4.70	0.177	0.185
L1	9.25	9.75	0.346	0.384
L2	0.95	1.45	0.037	0.057

