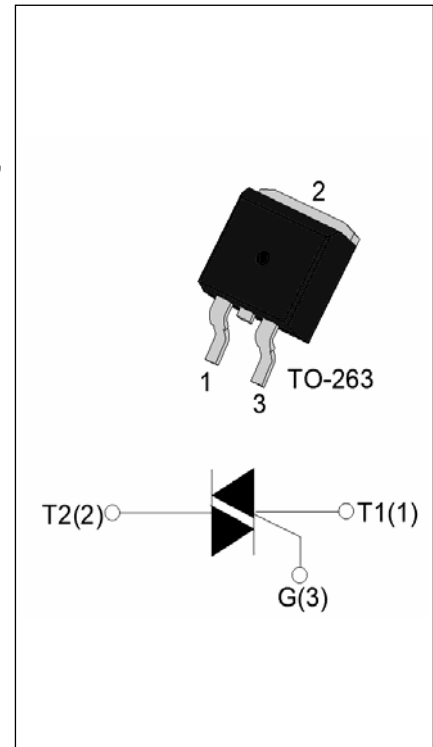


**DESCRIPTION:**

The T2550H-8E triac is suitable for general purpose AC switching. It can be used as an ON/OFF function in applications such as heating regulation, induction motor starting circuits, for phase control operation in light dimmers, motor speed controllers. Compared to traditional triacs, T2550H-8E provides a very high switching capability up to junction temperatures of 150°C. Package TO-263 is RoHS compliant.


**MAIN FEATURES**

Symbol	Value	Unit
$I_{T(RMS)}$	25	A
$V_{DRM}/V_{RRM}$	800	V
$I_{GT\ I/II/III}$	50/50/50	mA

**ABSOLUTE MAXIMUM RATINGS**

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40-150	°C
Operating junction temperature range	$T_j$	-40-150	°C
Repetitive peak off-state voltage ( $T_j=25^\circ\text{C}$ )	$V_{DRM}$	800	V
Repetitive peak reverse voltage ( $T_j=25^\circ\text{C}$ )	$V_{RRM}$	800	V
RMS on-state current ( $T_c \leq 117^\circ\text{C}$ )	$I_{T(RMS)}$	25	A
Non repetitive surge peak on-state current (full cycle , $t_p=20\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I_{TSM}$	250	A
Non repetitive surge peak on-state current (full cycle , $t_p=16.6\text{ms}$ , $T_j=25^\circ\text{C}$ )		275	
$I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I^2t$	310	$\text{A}^2\text{s}$
Critical rate of rise of on-state current ( $I_G=2 \times I_{GT}$ , $f=100\text{Hz}$ , $T_j=150^\circ\text{C}$ )	$di/dt$	100	$\text{A}/\mu\text{s}$
Peak gate current ( $t_p=20\mu\text{s}$ , $T_j=150^\circ\text{C}$ )	$I_{GM}$	4	A
Average gate power dissipation ( $T_j=150^\circ\text{C}$ )	$P_{G(AV)}$	1	W
Peak gate power	$P_{GM}$	10	W

Peak pulse voltage ( $T_j=25^\circ\text{C}$ ; non-repetitive, off-state; FIG.8)	$V_{pp}$	2	kV
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**ELECTRICAL CHARACTERISTICS** ( $T_j=25^\circ\text{C}$  unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
$I_{GT}$	$V_D=12\text{V}$ $R_L=33$	I - II - III	MAX.	50	mA
$V_{GT}$		I - II - III	MAX.	1	V
$V_{GD}$	$V_D=V_{DRM}$ $T_j=150^\circ\text{C}$ $R_L=3.3\text{K}$	I - II - III	MIN.	0.2	V
$I_L$	$I_G=1.2I_{GT}$	I - III	MAX.	70	mA
		II		80	
$I_H$	$I_T=500\text{mA}$		MAX.	60	mA
$dV/dt$	$V_D=540\text{V}$ Gate Open $T_j=150^\circ\text{C}$		MIN.	2000	V/ $\mu\text{s}$
$(dI/dt)_c$	$(dV/dt)_c=20\text{V}/\mu\text{s}$ , $T_j=150^\circ\text{C}$		MIN.	25	A/ms
$t_{on}$	$I_G=80\text{mA}$ $I_A=400\text{mA}$ $I_R=40\text{mA}$ $T_j=25^\circ\text{C}$		TYP.	15	$\mu\text{s}$
$t_{off}$				100	

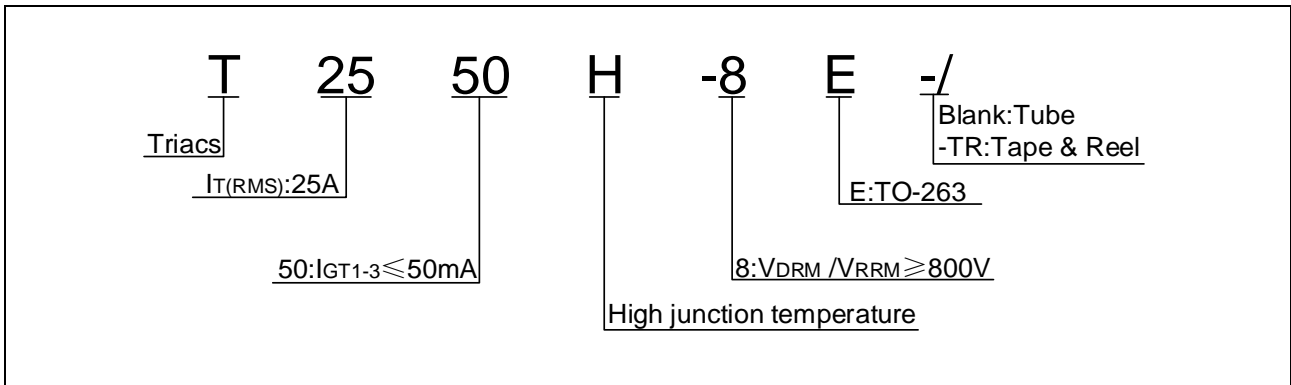
**STATIC CHARACTERISTICS**

Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM}=35\text{A}$ $t_p=380\mu\text{s}$	$T_j=25^\circ\text{C}$	1.4	V
$V_{TO}$	Threshold voltage	$T_j=150^\circ\text{C}$	0.72	V
$R_D$	Dynamic resistance	$T_j=150^\circ\text{C}$	19	m
$I_{DRM}$	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	5	$\mu\text{A}$
$I_{RRM}$		$T_j=150^\circ\text{C}$	5	mA

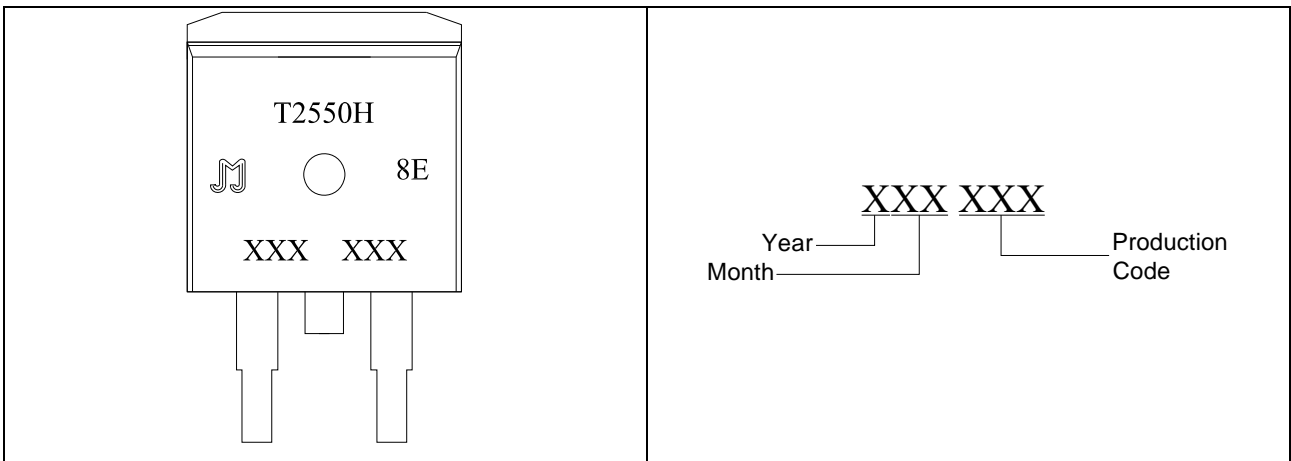
**THERMAL RESISTANCES**

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	1	$^\circ\text{C}/\text{W}$
$R_{th(j-a)}$	junction to ambient (AC, in free air, $S=2\text{cm}^2$ )	45	$^\circ\text{C}/\text{W}$

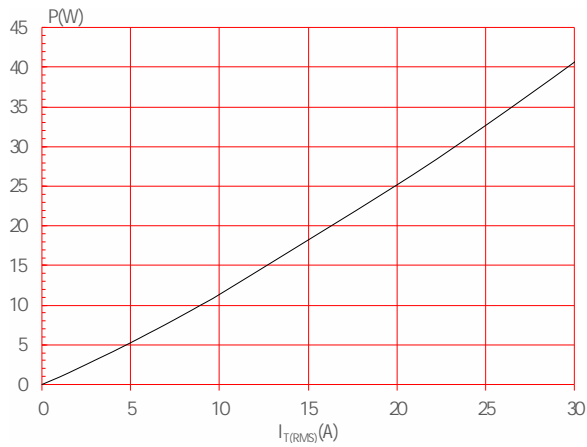
ORDERING INFORMATION



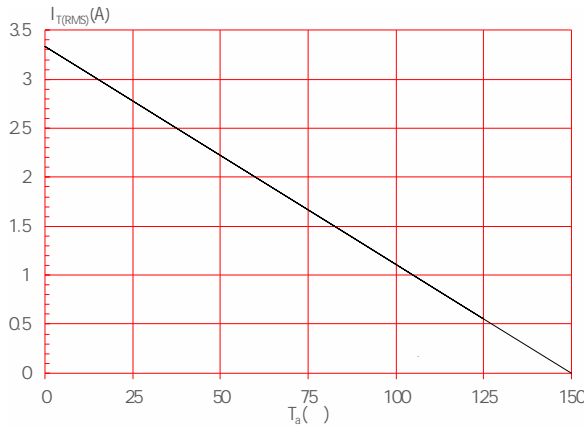
MARKING



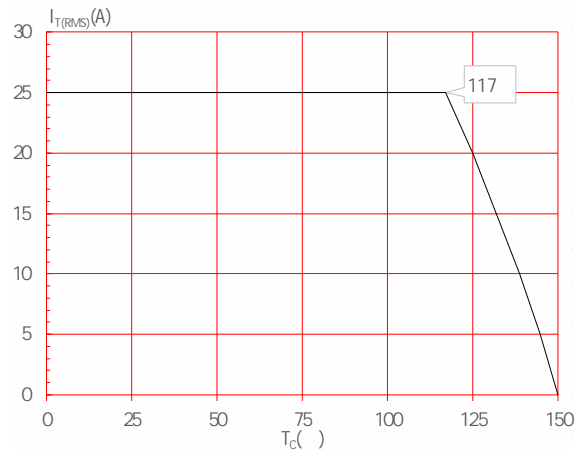
**FIG.1** Maximum power dissipation versus RMS on-state current



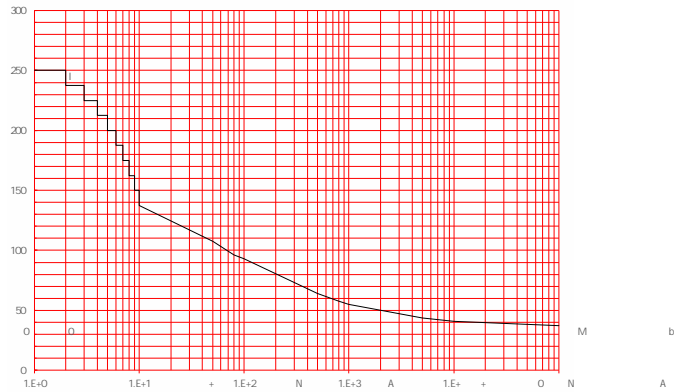
**FIG.3:** RMS on-state current versus ambient temperature (printed circuit board FR4,copper thickness:35 $\mu$ m)(full cycle)



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



**FIG.4:** Surge peak on-state current versus number of cycles



**FIG.7:** Relative variations of gate trigger current, holding current and latching current versus junction temperature



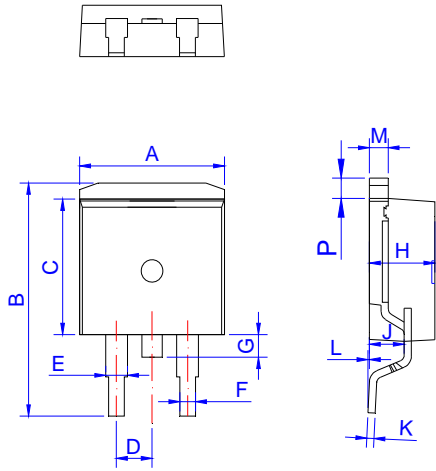
**ORDERING INFORMATION**

Order code	Voltage V <sub>DRM</sub> /V <sub>RRM</sub> (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
T2550H-8E	800	50	TO-263	50	Tube
T2550H-8E-TR				800	Tape & Reel

**Document Revision History**

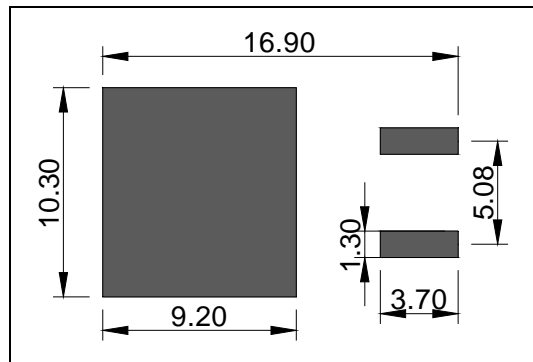
Date	Revision	Changes
Jun.13, 2023	A.1.0	Last updated

PACKAGE MECHANICAL DATA



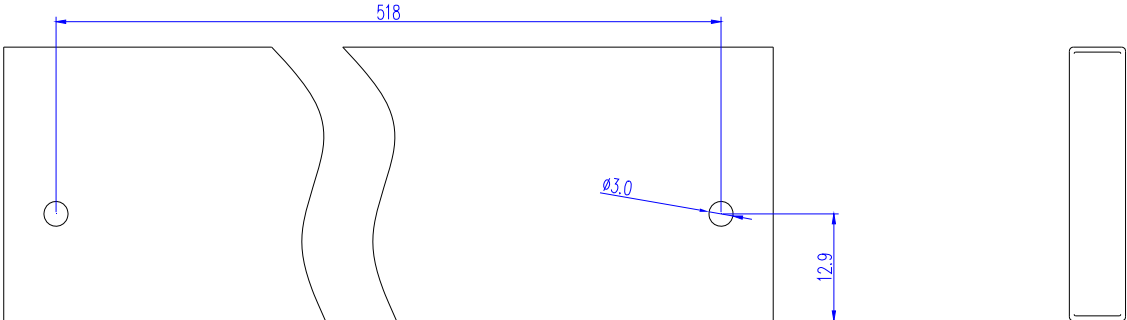
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	9.90		10.20	0.390		0.402
B	14.70		15.80	0.579		0.622
C	9.40		9.60	0.37		0.378
D	2.40		2.70	0.094		0.106
E	1.20		1.50	0.047		0.059
F	0.75		0.85	0.029		0.033
G	1.00		1.50	0.039		0.059
H	4.40		4.70	0.173		0.185
J	2.30		2.70	0.091		0.106
K	0.38		0.55	0.015		0.022
L	0	0.10	0.25	0	0.004	0.010
M	1.25		1.35	0.049		0.053
P	1.20		1.50	0.047		0.059

FOOTPRINT TO 263 (dimensions in mm)






DELIVERY MODE



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