



T2535H-6E 25A TRIAC

Rev.A.1.0

The T2535H-6E is a sensitive triac
 with a wide ON/OFF control range
 and a wide operating temperature range.
 It is suitable for AC power control
 applications. The typical ON/OFF control
 range is 0.1V to 10V. The typical
 operating temperature range is -40°C
 to 150°C. The typical ON/OFF control
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 operating temperature range is -40°C
 to 150°C.

Symbol	Value	Unit
$I_{T(RMS)}$	25	A
V_{DRM} / V_{RRM}	600	V
$I_{GT1} / I_{H1} / I_{H2}$	35/35/35	A

Parameter	Symbol	Value	Unit
Storage temperature range	T_g	-40-150	°C
Operating temperature range	T_j	-40-150	°C
Repetitive peak reverse voltage (T _j = 25°C)	V_{DRM}	600	V
Repetitive peak reverse voltage (T _j = 25°C)	V_{RRM}	600	V
RMS on-state current (T _c ≤ 117°C)	$I_{T(RMS)}$	25	A
Non-repetitive surge current (f _{avg} = 20ms, T _j = 25°C)	I_{TSM}	250	A
Non-repetitive surge current (f _{avg} = 16.6ms, T _j = 25°C)		275	
Surge energy (t _p = 10ms, T _j = 25°C)	I^2t	310	A ² s
Current rise rate (I _G = 2 × I _{GT} , f = 100Hz, T _j = 150°C)	di/dt	100	A/μs
Peak gate current (t _p = 20μs, T _j = 150°C)	I_{GM}	4	A
Average gate power dissipation (T _j = 150°C)	$P_{G(AV)}$	1	W
Peak gate power	P_{GM}	10	W

Peak ($T_j=25^\circ\text{C}$; ρ_{eff} ; FIG. 8)	V_p	1.5	V
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($T_j=25^\circ\text{C}$ relative)

Symbol	Test Condition	Quadrant	Value		Unit
I_{GT}	$V_D=12\text{V}$ $R_L=33$	I - II - III	MAX .	35	A
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 .	50	A
		II		60	
I_H	$I_T=500\text{A}$		MAX .	40	A
dV/dt	$V_D=400\text{V}$ $G\&O$ n $T_j=150^\circ\text{C}$		MIN .	1200	V/ μs
$(dI/dt)_c$	$(dV/dt)_c=20\text{V}/\mu\text{s}$, $T_j=150^\circ\text{C}$		MIN .	18	A/ μs
t_b	$I_G=40\text{A}$ $I_A=200\text{A}$ $I_R=20\text{A}$ $T_j=25^\circ\text{C}$		TYP.	10	μs
t_f				80	

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}	T_{th}	$T_j=150^\circ\text{C}$	0.72	V
R_D	D_{jct}	$T_j=150^\circ\text{C}$	19	m
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25^\circ\text{C}$	5	μA
I_{RRM}		$T_j=150^\circ\text{C}$	4	A

Symbol	Parameter	Value	Unit
$R_{\theta j-c}$	θ_{j-c} (AC)	1	$^\circ\text{C}/\text{W}$
$R_{\theta j-a}$	θ_{j-a} (AC, $i_{free} \leq 2\text{cm}$) ²⁾	45	$^\circ\text{C}/\text{W}$

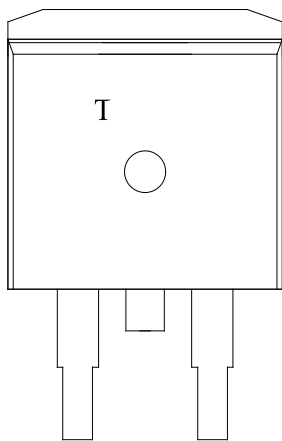
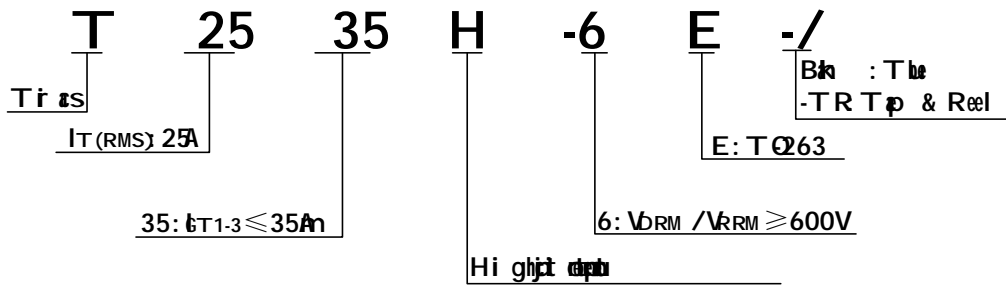


FIG.1 Max ρ vs ρ RMS
 ρ vs ρ

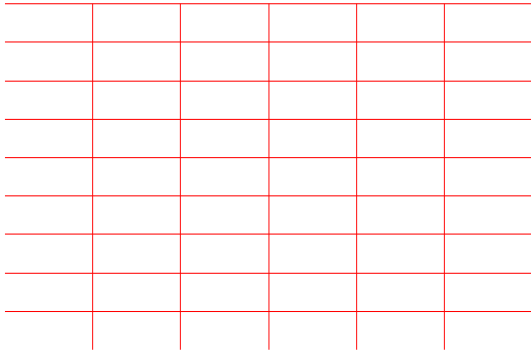


FIG.2: RMS ρ vs ρ
 ρ vs ρ

FIG.7: Reliability graph
bi g celi ti g celi
jt dpa

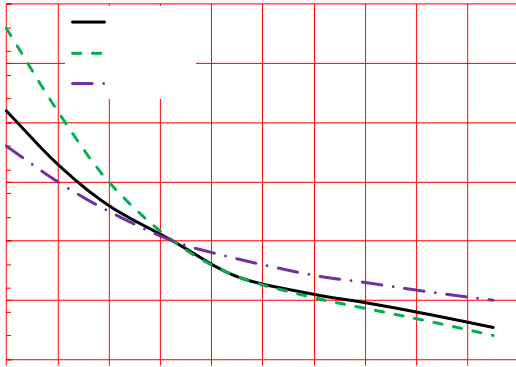


FIG. 8 : Test circuit for $V_{DS} < V_{GS}$

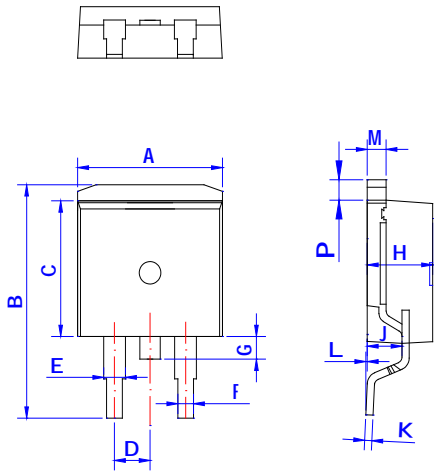
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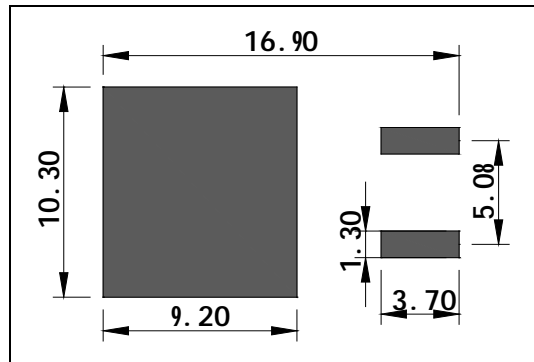
Order code	Voltage V _{DRM} /V _{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
T2535H-6E	600	35	TO-263	50	Tube
T2535H-6E-TR				800	Tape & Reel

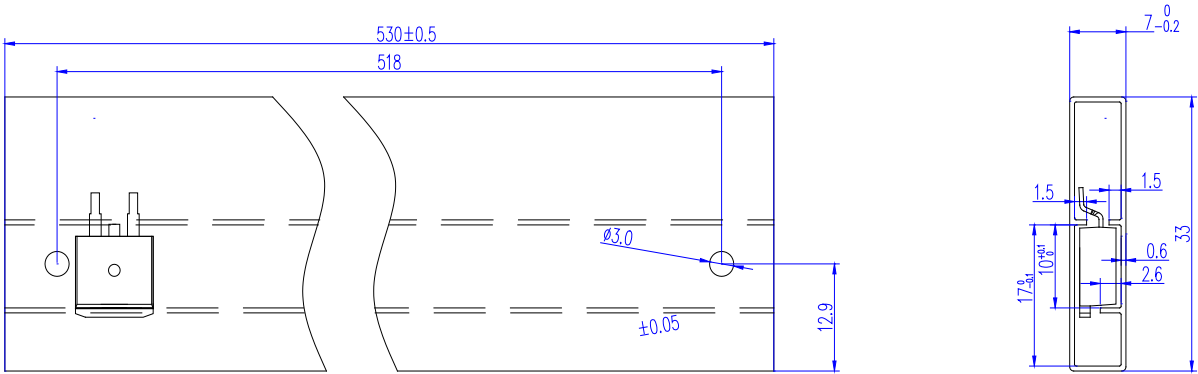
Document Revision History

Date	Revision	Changes
Apr.10, 2023	A.1.0	Initial



Ref.	Dimensions					
	Min			Max		
	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





	TUBE	INNER BOX (PCS)	PER CARTON

