

**T3050H-8E 30A TRIAC**

Rev.A.1.1

The T3050H-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, T3050H-8E provides a very high switching capability up to junction temperatures of 150°C. Package TO-263 is RoHS compliant.

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40-150	
Operating junction temperature range	$T_j$	-40-150	
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 ( $T_c=117^\circ\text{C}$ )	$I_{T(RMS)}$	30	A
Non repetitive surge peak on-state current (full cycle, $t_p=20\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I_{TSM}$	270	A
Non repetitive surge peak on-state current (full cycle, $t_p=16.6\text{ms}$ , $T_j=25^\circ\text{C}$ )		297	
$I^2t$ value for fusing ( $t_p=10\text{ms}$ , $T_j=25^\circ\text{C}$ )	$I^2t$	365	$\text{A}^2\text{s}$
Critical rate of rise of on-state current ( $I_G=2 I_{GT}$ , $f=100\text{Hz}$ , $T_j=150^\circ\text{C}$ )	$di/dt$	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

Peak pulse voltage ( $T_j=25$ ; non-repetitive, off-state; FIG.8)	$V_{pp}$	1.2	kV
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(T<sub>j</sub>=25 unless otherwise specified)

Symbol	Test Condition	Quadrant	Value		Unit
$I_{GT}$	$V_D=12V$ $R_L=33$	- -	MAX.	50	mA
$V_{GT}$		- -	MAX.	1.3	V
$V_{GD}$	$V_D=V_{DRM}$ $T_j=150$ $R_L=3.3k$	- -	MIN.	0.15	V
$I_L$	$I_G=1.2I_{GT}$	-	MAX.	80	mA
				90	
$I_H$	$I_T=500mA$		MAX.	60	mA
dV/dt	$V_D=540V$ Gate Open $T_j=150$		MIN.	2000	V/ $\mu s$
(dI/dt) <sub>c</sub>	(dV/dt) <sub>c</sub> =20V/ $\mu s$ , $T_j=150$		MIN.	30	A/ms
$t_{on}$	$I_G=80mA$ $I_A=400mA$ $I_R=40mA$ $T_j=25$		TYP.	15	$\mu s$
$t_{off}$				100	

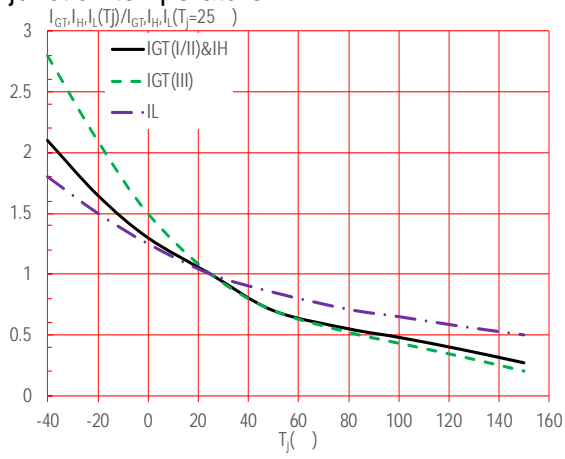
Symbol	Parameter		Value(MAX.)	Unit
$V_{TM}$	$I_{TM}=42A$ $t_p=380\mu s$	$T_j=25$	1.5	V
$V_{TO}$	Threshold voltage	$T_j=150$	0.7	V
$R_D$	Dynamic resistance	$T_j=150$	16	m
$I_{DRM}$	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25$	8	$\mu A$
$I_{RRM}$		$T_j=150$	8	mA

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (AC)	0.8	$\text{W}$
$R_{th(j-a)}$	junction to ambient (AC, in free air, $S=2cm^2$ )	45	$\text{W}$





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





Order code	Voltage $V_{DRM}/V_{RRM}$ (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
		- -			
T3050H-8E	800	50	TO-263	50	Tube
T3050H-8E-TR					





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