

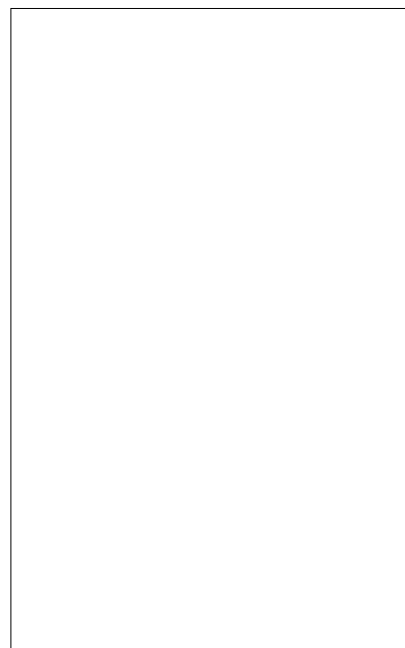


## JCT1208E 8A SCR

Rev.A.1.1

### DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT1208E provides high  $dV/dt$  rate with strong resistance to electromagnetic interference. It is especially recommended for use on hair straightener motorcycle voltage regulator etc. Package TO-263 is RoHS compliant.



### MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	8	A
$V_{DRM}/V_{RRM}$	1200	V
$I_{GT}$	15	mA

### ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40-150	
Operating junction temperature range	$T_j$	-40-125	
Repetitive peak off-state voltage ( $T_j=25^\circ C$ )	$V_{DRM}$	1200	V
Repetitive peak reverse voltage ( $T_j=25^\circ C$ )	$V_{RRM}$	1200	V
Average on-state current ( $T_c=92^\circ C$ )	$I_{T(AV)}$	5	A
RMS on-state current ( $T_c=92^\circ C$ )	$I_{T(RMS)}$	8	A
Non repetitive surge peak on-state current ( $t_p=10ms, T_j=25^\circ C$ )	$I_{TSM}$	85	A
Non repetitive surge peak on-state current ( $t_p=8.3ms, T_j=25^\circ C$ )		94	
$I^2t$ value for fusing ( $t_p=10ms, T_j=25^\circ C$ )	$I^2t$	36	$A^2s$

Critical rate of rise of on-state current

Peak gate power	$P_{GM}$	5	W
Peak pulse voltage ( $T_j=25$ ; non-repetitive, off-state; FIG.8)	$V_{pp}$	1	kV

**ELECTRICAL CHARACTERISTICS** ( $T_j=25$  unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
$I_{GT}$	$V_D=12V$ $R_L=33$	-	-	15	mA
$V_{GT}$		-	-	1	V
$V_{GD}$	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3k$	0.2	-	-	V
$I_L$	$I_G=1.2I_{GT}$	-	-	40	mA
$I_H$	$I_T=500mA$	-	-	30	mA
dV/dt	$V_D=800V$ Gate Open $T_j=125$	1000	-	-	V/ $\mu s$
$t_{on}$	$I_G=20mA$ $I_A=200mA$ $I_R=20mA$ $T_j=25$	-	5	-	$\mu s$
$t_{off}$		-	100	-	$\mu s$

**STATIC CHARACTERISTICS**

Symbol	Parameter	Value(MAX.)	Unit	
$V_{TM}$	$I_{TM}=16A$ $t_p=380\mu s$ $T_j=25$	1.6	V	
$V_{TO}$	Threshold voltage $T_j=125$	0.8	V	
$R_D$	Dynamic resistance $T_j=125$	28	m	
$I_{DRM}$	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25$	10	$\mu A$
$I_{RRM}$		$T_j=125$	1	mA

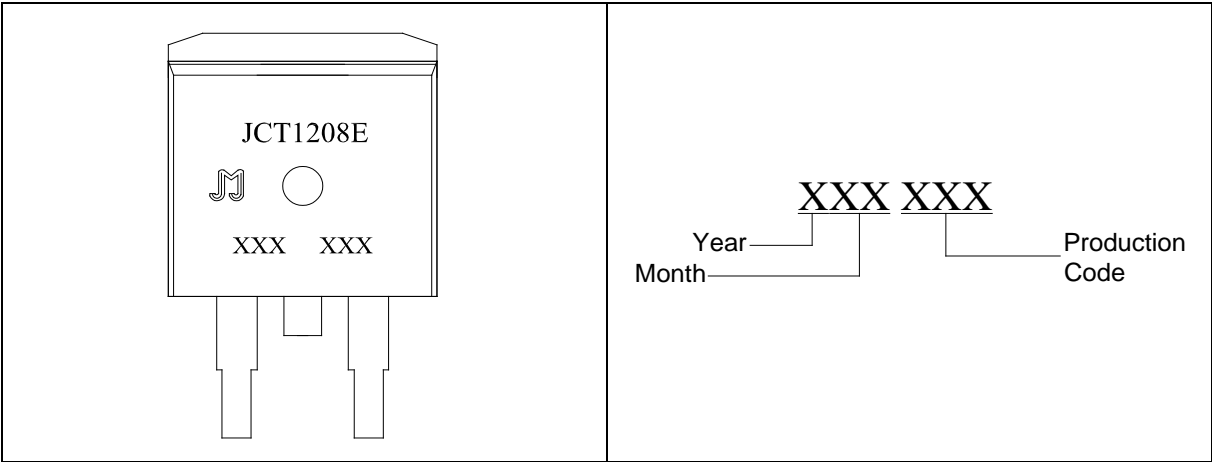
**THERMAL RESISTANCES**

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	junction to case (DC)	2.9	$^{\circ}W$
$R_{th(j-a)}$	junction to ambient (DC, in free air, $S=1cm^2$ )	60	$^{\circ}W$

ORDERING INFORMATION

<b>J</b>	<b>CT</b>	<b>12</b>	<b>08</b>	<b>E</b>	<b>-/</b>
JieJie Microelectronics Co., Ltd.	SCRs	12:VDRM /VRRM 1200V	08:IT(RMS):8A	E:TO-263	Blank:Tube -TR:Tape & Reel

MARKING



**JCT1208E**

**J**

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





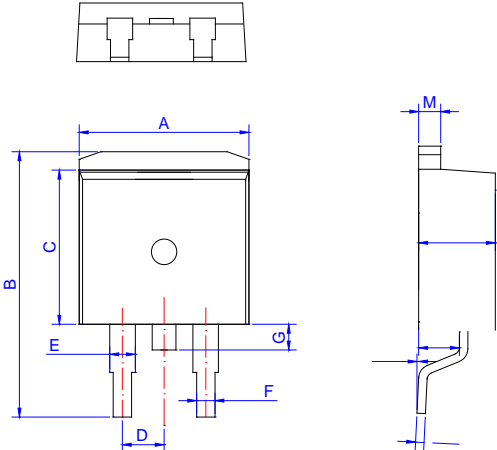
**ATION**

oltage /V <sub>RRM</sub> (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
1200	15	TO-263	50	Tube
			800	Tape & Reel

**Document Revision History**

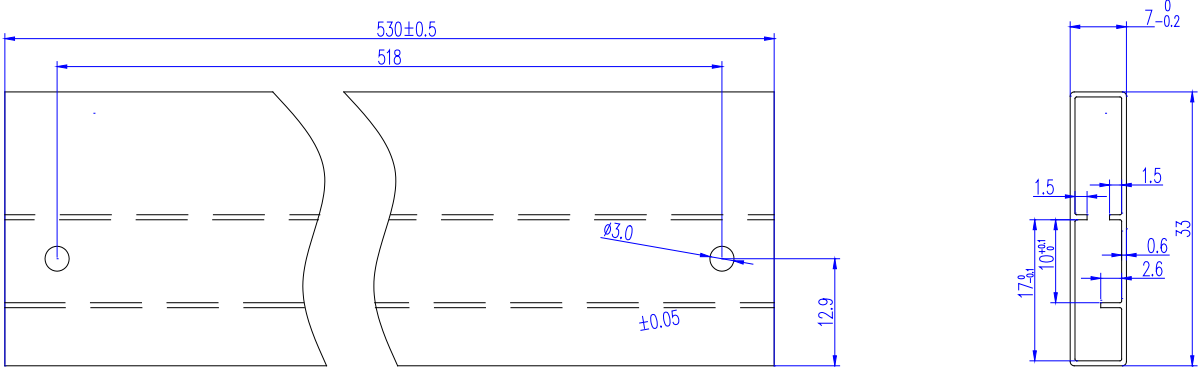
Revision	Changes
A.1.0	Last update

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	0.370		0.378
D	2.40			0.094		
E	1.20		1.50	0.047		0.059
F	0.75		0.85	0.029		0.033

DELIVERY MODE



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