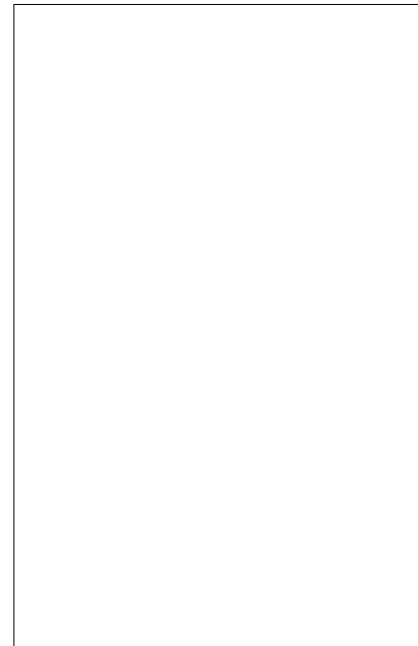


**JCT1208E 8A SCR**

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 ($T_j=25^\circ\text{C}$)	V_{DRM}	1200	V
Repetitive peak reverse voltage ($T_j=25^\circ\text{C}$)	V_{RRM}	1200	V
Average on-state current ($T_c \leq 92^\circ\text{C}$)	$I_{T(AV)}$	5	A
RMS on-state current ($T_c \leq 92^\circ\text{C}$)	$I_{T(RMS)}$	8	A
Non repetitive surge peak on-state current ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	I_{TSM}	85	A
Non repetitive surge peak on-state current ($t_p=8.3\text{ms}$, $T_j=25^\circ\text{C}$)		94	
I^2t value for fusing ($t_p=10\text{ms}$, $T_j=25^\circ\text{C}$)	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}	$V_D=12V$ $R_L=33\Omega$	-	-	15	mA
V_{GT}		-	-	1	V
V_{GD}	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3k\Omega$	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/ μs
t_{on}	$I_G=20mA$ $I_A=200mA$ $I_R=20mA$ $T_j=25$	-	5	-	μs
t_{off}		-	100	-	μs

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	$m\Omega$
I_{DRM}	$V_D=V_{DRM}$ $V_R=V_{RRM}$	$T_j=25$	10	μA
I_{RRM}		$T_j=125$	1	mA

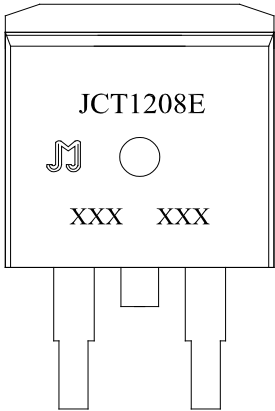
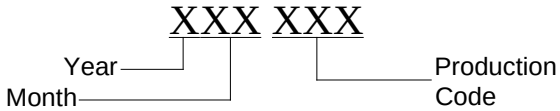
THERMAL RESISTANCES

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

ORDERING INFORMATION

<u>J</u>	<u>CT</u>	<u>12</u>	<u>08</u>	<u>E</u>	<u>-/</u>
JieJie Microelectronics Co., Ltd.	SCRs			E:TO-263	Blank:Tube -TR:Tape & Reel
12:V _{DRM} /V _{RRM} ≥ 1200V			I _{T(RMS)} :8A		

MARKING

	
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JCT1208E

J

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



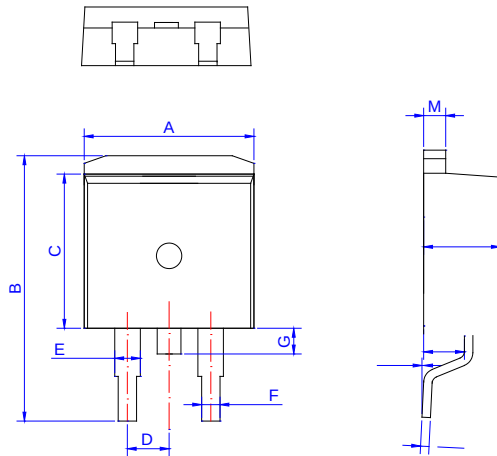
ATION

Voltage /V _{RRM} (V)	IGT(mA)	Package	Base qty. (pcs)	Delivery mode
1200	15	TO-263	50	Tube
			800	Tape & Reel

Document Revision History

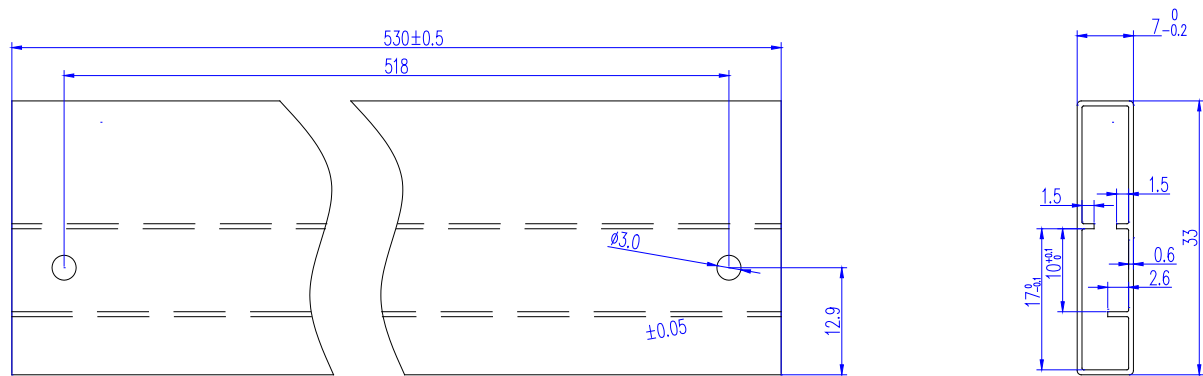
Revision	Changes
A.1.0	Last update

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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