



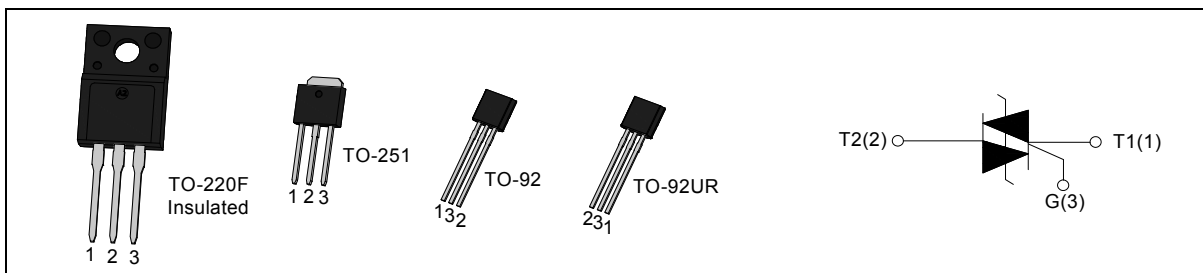
DESCRIPTION:

JST02 series provide high dv/dt rate with strong resistance to electromagnetic interface.

They are especially recommended for use on home appliances such as motor control of washing machine, and for use on industrial control systems like electromagnetic valves. JST02X provides insulation voltage rated at 2000V RMS from all three terminals to external heatsink complying with UL standards (File ref: E252906).

MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	2	A
I_{GT1-3}	10	mA
V_{DRM}/V_{RRM}	800/1000	V



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	°C
Operating junction temperature range	T_j	-40-125	°C
Repetitive peak off-state voltage($T_j=25^{\circ}C$)	V_{DRM}	800/1000	V
Repetitive peak reverse voltage($T_j=25^{\circ}C$)	V_{RRM}	800/1000	V
RMS on-state current	TO-92/ TO-92UR ($T_c=60^{\circ}C$)	2	A
	TO-251/ TO-220F(Ins) ($T_c=100^{\circ}C$)		
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	20	A
I^2t value for fusing ($t_p=10ms$)	I^2t	2	A ² s
Rate of rise of on-state current ($I_G=2 \times I_{GT}$)	di/dt	50	A/ μ s

Peak gate current	I_{GM}	2	A
Average gate power dissipation	$P_{G(AV)}$	0.5	W
Peak gate power	P_{GM}	5	W

ELECTRICAL CHARACTERISTICS ($T_j=25^{\circ}C$ unless otherwise specified)

Symbol	Test Condition	Quadrant		Value	Unit
I_{GT}	$V_D=12V R_L=33\Omega$	I - II -III	MAX	10	mA
V_{GT}		I - II -III	MAX	1.3	V
V_{GD}	$V_D=V_{DRM} T_j=125^{\circ}C$ $R_L=3.3K\Omega$	I - II -III	MIN	0.2	V
I_L	$I_G=1.2I_{GT}$	I -III	MAX	20	mA
		II		40	
I_H	$I_T=100mA$		MAX	15	mA
dV/dt	$V_D=2/3V_{DRM}$ Gate Open $T_j=125^{\circ}C$		MIN	500	V/ μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX)	Unit
V_{TM}	$I_{TM}=3.5A t_p=380\mu s$	$T_j=25^{\circ}C$	1.5	V
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25^{\circ}C$	5	μA
I_{RRM}		$T_j=125^{\circ}C$	1	mA

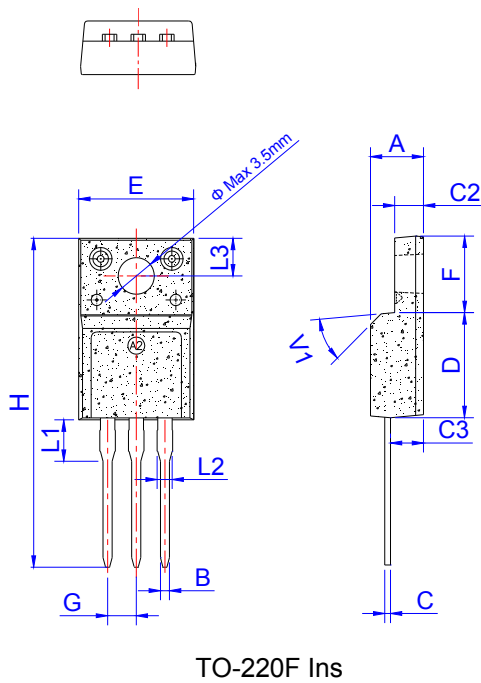
THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-c)}$	junction to case(AC)	TO-92/ TO-92UR	23	$^{\circ}C/W$
		TO-251	6.5	
		TO-220F(Ins)	8	

ORDERING INFORMATION

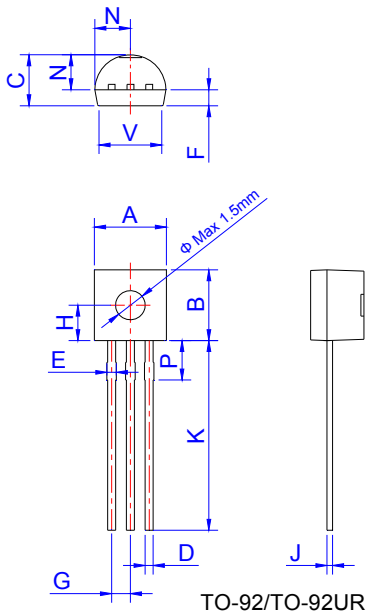
J	ST	02	U	-800	SW
JieJie Microelectronics Co.,Ltd		Triacs			$I_{GT1-3} \leq 10mA$
		$I_{T(RMS)}: 2A$			800: $V_{DRM} / V_{RRM} \geq 800V$ 1000: $V_{DRM} / V_{RRM} \geq 1000V$
			U: TO-92 H: TO-251 UR: TO-92UR X: TO-220F(Ins)		

PACKAGE MECHANICAL DATA

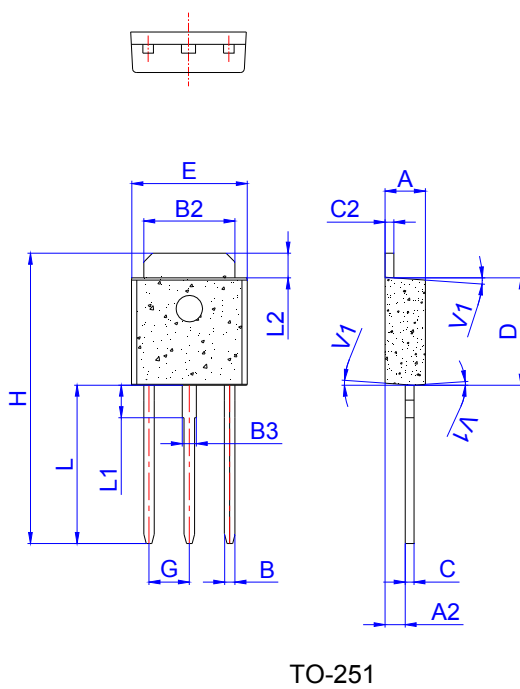


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.50		4.90	0.177		0.193
B	0.74	0.80	0.83	0.029	0.031	0.033
C	0.47		0.65	0.019		0.026
C2	2.45		2.75	0.096		0.108
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.80		10.4	0.386		0.410
F	6.40		6.80	0.252		0.268
G		2.54			0.1	
H	28.0		29.8	1.102		1.173
L1		3.63			0.143	
L2	1.14		1.70	0.045		0.067
L3		3.30			0.130	
V1		45°			45°	

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.407		0.533	0.016		0.021
E	0.50		0.70	0.020		0.028
F	-	1.1	-	-	0.043	-
G	-	1.27	-	-	0.050	-
H	-	2.30	-	-	0.091	-
J	0.36		0.50	0.014		0.020
K	12.70		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.86		2.06	0.073		0.081
V	-		4.3	-		0.169



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	0.90		1.20	0.035		0.047
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
B3	0.76		0.85	0.030		0.033
C	0.45		0.62	0.018		0.024
C2	0.48		0.62	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.70	0.252		0.264
G		2.30			0.091	
H	16.0		17.0	0.630		0.669
L	8.90		9.40	0.350		0.370
L1	1.80		1.90	0.071		0.075
L2	1.37		1.50	0.054		0.059
V1		4°			4°	

PACKAGE INFORMATION

PACKAGE	OUTLINE	TUBE (PCS)	INNER BOX (PCS)	PER CARTON
TO-220F	TUBE	50	1,000	6,000
TO-251	TUBE	80	4,000	32,000
PACKAGE	OUTLINE	BAG (PCS)	INNER BOX (PCS)	PER CARTON
TO-92/ TO-92UR	Shielding Bag	1,000	10,000	30,000

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

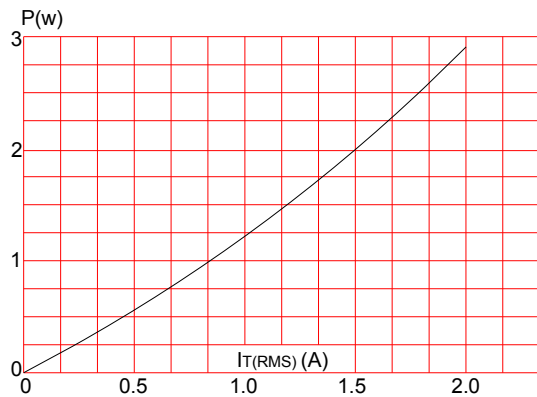


FIG.2: RMS on-state current versus case temperature

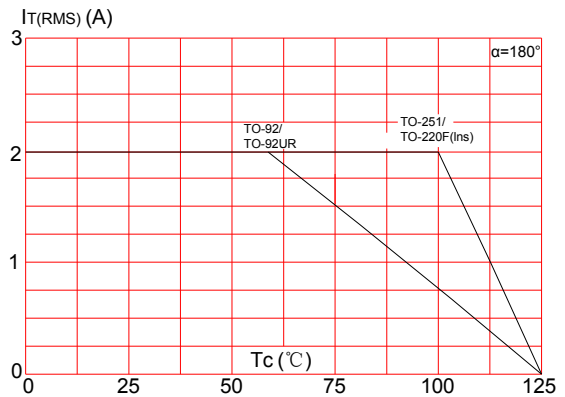


FIG.3: Surge peak on-state current versus number of cycles

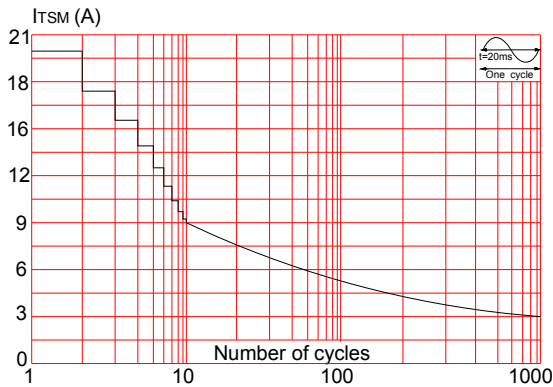


FIG.4: On-state characteristics (maximum values)

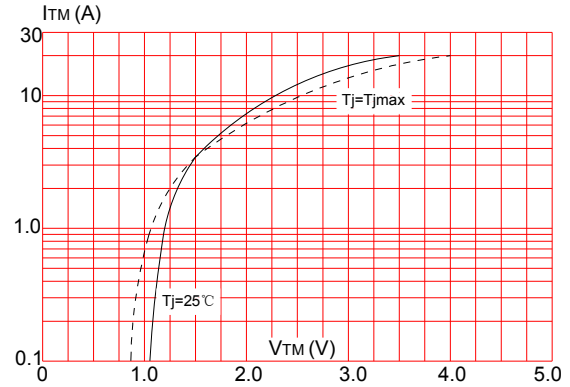


FIG.5: Relative variations of gate trigger current versus junction temperature

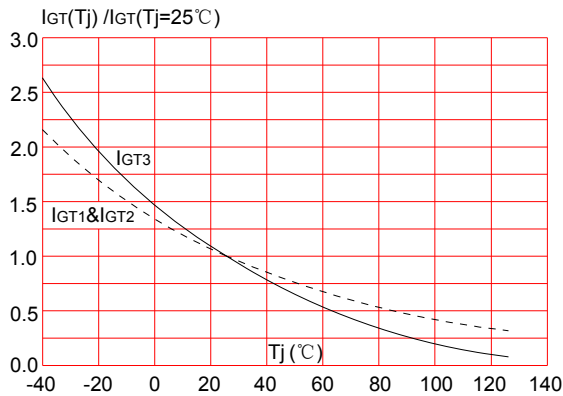
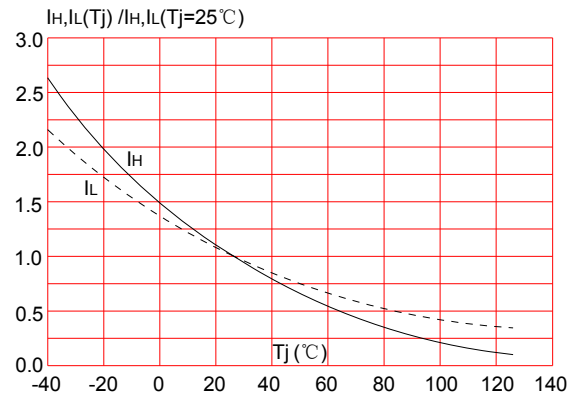



FIG.6: Relative variations of holding current, latching current versus junction temperature



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