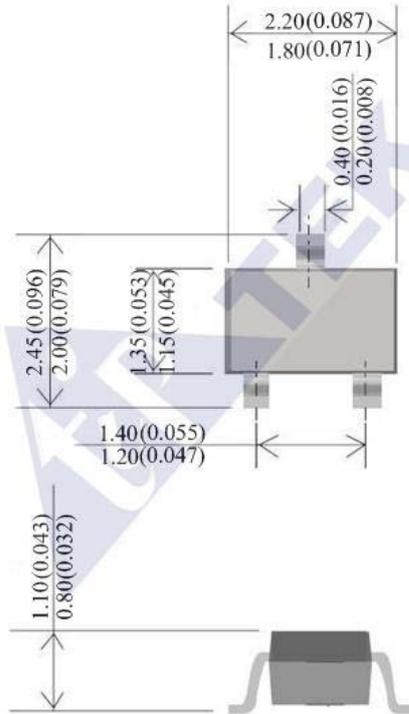


P-CHANNEL 130mA POWER MOSFET



CASE : SOT-323

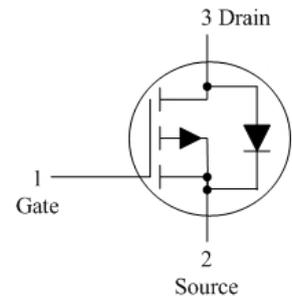
DIMENSIONS IN MILLIMETERS AND (INCHES)

FEATURES

- ADVANCED TRENCH PROCESS TECHNOLOGY
- HIGH DENSITY CELL DESIGN FOR ULTRA LOW ON-RESISTANCE
- FULLY CHARACTERIZED AVALANCHE VOLTAGE AND CURRENT
- IMPROVED SHOOT-THROUGH FOM
- BOTH NORMAL AND PB FREE PRODUCT ARE AVAILABLE :NORMAL : 80~95% SN, 5~20% PB
PB FREE: 99% SN ABOVE

MECHANICAL DATA

- WE DECLARE THAT THE MATERIAL OF PRODUCT COMPLIANCE WITH ROHS REUIREMENTS.
- Pb Free: BSS84W
Halogen Free: BSS84W-H



ABSOLUTE MAXIMUM RATINGS

RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED.			
PATING	SYMBOL	BSS84W	UNITS
DRAIN-SOURCE VOLTAGE	V_{DSS}	50	V
GATE-SOURCE VOLTAGE	V_{GSS}	± 20	V
MAXIMUM DRAIN CURRENT-CONTINUE	I_D	130	mA
MAXIMUM POWER DISSIPATION DERATING @ $T_A = 25^\circ\text{C}$	P_D	225	mW
OPERATING AND STORAGE JUNCTION TEMPERATURE RANGE	$T_J; T_{STG}$	- 55 TO +150	$^\circ\text{C}$
THERMAL RESISTANCE, JUNCTION-TO-AMBIENT (NOTE1)	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$

NOTE:1. 1-in² 2oz Cu PCB board

ELECTRICAL CHARACTERISTICS

ELECTRICAL CHARACTERISTICS (AT T_A =25°C UNLESS OTHERWISE NOTED)						
CHARACTERISTIC		SYMBOL	MIN	TYP	MAX	UNITS
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250μA	V _{(BR)DSS}	50	–	–	V
Zero Gate Voltage Drain Current	V _{DS} =25V, V _{GS} =0V, T _J =25°C	I _{DSS}	–	–	0.1	μA
	V _{DS} =50V, V _{GS} =0V, T _J =25°C				15	
	V _{DS} =50V, V _{GS} =0V, T _J =125°C				60	
Gate-Body Leakage Current (V _{DS} =0, V _{GS} =±20V)		I _{GSS}	–	–	±10	nA
ON CHARACTERISTICS (NOTE 1)						
Gate Threshold Voltage(V _{DS} = V _{GS} , I _D =1.0mA)		V _{GS(th)}	0.8	–	2.0	V
Static Drain-Source On-Resistance	V _{GS} =5.0V, I _D =100mA	r _{DS(ON)}	–	5.0	10	Ω
Transfer Admittance (V _{DS} =25V, I _D =100 mA,f=1.0KHz)		y _{fS}	50	–	–	mS
DYNAMIC CHARACTERISTICS						
Input Capacitance	V _{DS} =25V, V _{GS} =0V, f=1.0MHz	C _{ISS}	–	30	–	pF
Output Capacitance		C _{OSS}	–	10	–	pF
Transfer Capacitance		C _{RSS}	–	5.0	–	pF
Gate Charge		Q _T	–	6000	–	pC
SWITCHING CHARACTERISTICS (NOTE 2)						
Turn-On Time	V _{DD} =-15V, R _L =50Ω, I _D = -2.5A	T _{ON}	–	2.5	–	ns
Turn-Off Time		T _{OFF}	–	16	–	ns
SOURCE-DRAIN DOIDE CHARACTERISTICS						
Continuous Current		I _S	–	–	0.13	A
Pulsed Current		I _{SM}	–	–	0.52	
Forward Voltage (NOTE 2)		V _{SD}	–	2.5	–	V

NOTE: 1. Pulse Test: Pulse Width <300 us, Duty Cycle <2.0%.

2.Switching characteristics are independent of operating junction temperature.

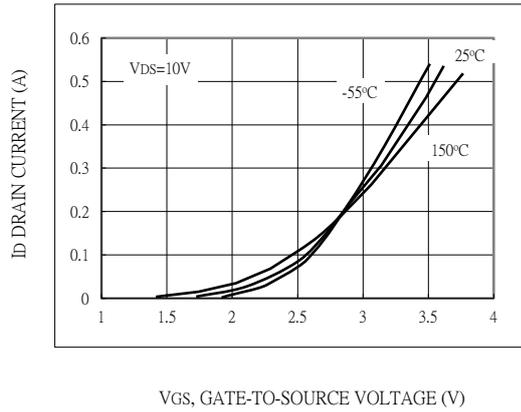


Fig.1-TRANSFER CHARACTERISTICS

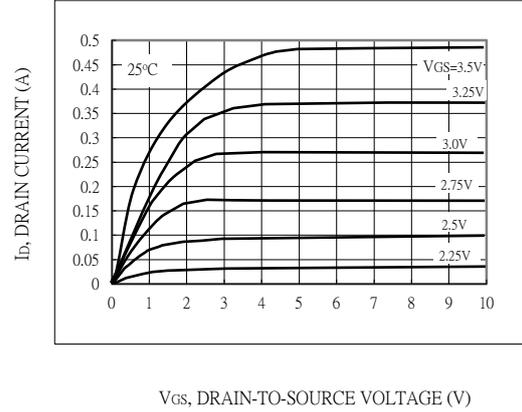


Fig.2-ON-REGION CHARACTERISTICS

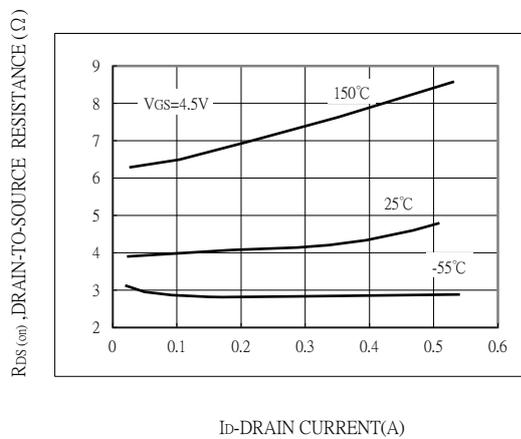


Fig.3- ON-RESISTANCE VERSUS DRAIN CURRENT

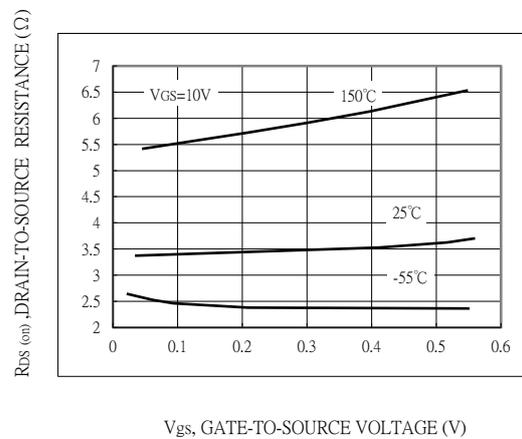


Fig.4-ON-RESISTANCE VS GATE-TO-SOURCE VOLTAGE

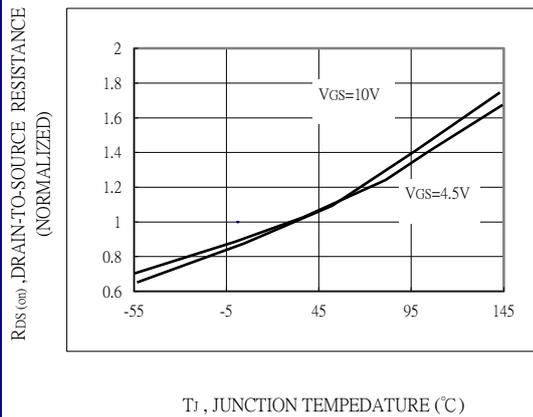


Fig.5- ON-RESISTANCE VERSUS DRAIN CURRENT

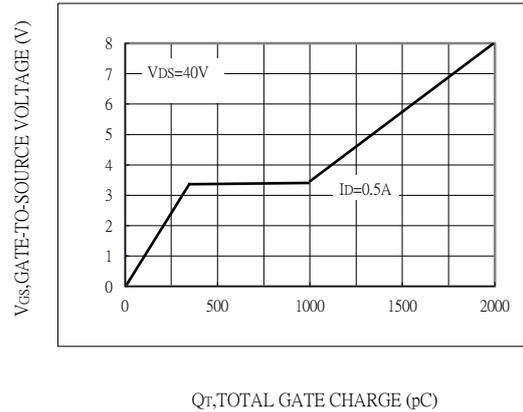


Fig.6-GATE CHARGE

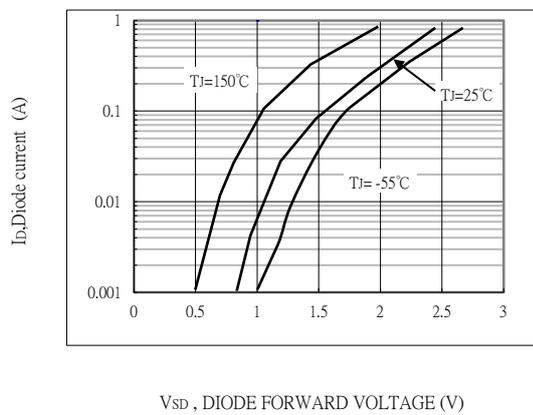


Fig.7- BODY DIODE FORWARD VOLTAGE