PRELIMINARY

SFF150

SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada,CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

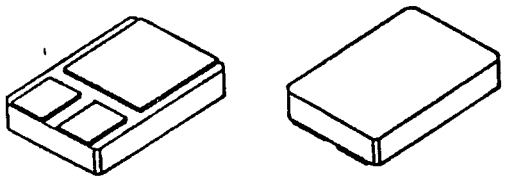
Designer's Data Sheet

30 AMP
100 VOLTS
0.055 Ω
N-CHANNEL
POWER MOSFET

FEATURES:

- Rugged construction with poly silicon gate
- Low RDS(on) and high transconductance
- Excellent high temperature stability
- Very fast switching speed
- Fast recovery and superior dv/dt performance
- Increased reverse energy capability
- Low input and transfer capacitance for easy paralleling
- Hermetically sealed power surface mount package
- TX, TXV and Space Level screening available
- Replaces: IRF150 Types

MILPACK



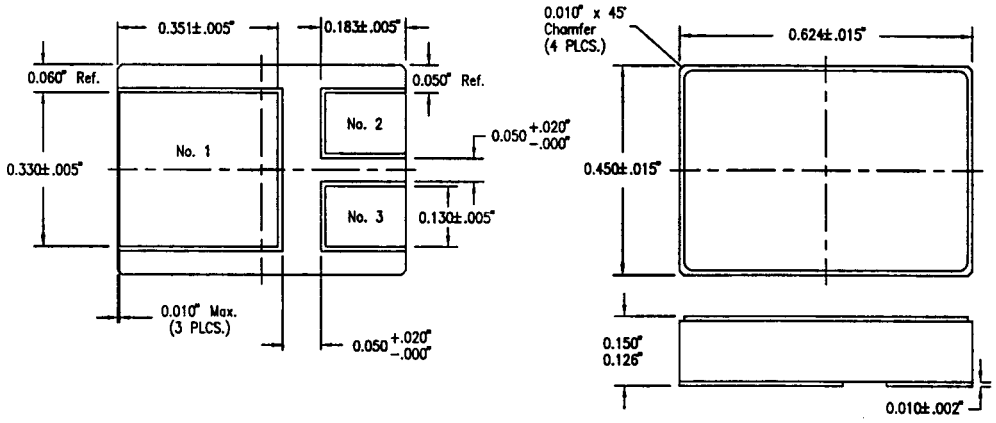
MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Drain to Source Voltage	V_{DS}	100	Volts
Gate to Source Voltage	V_{GS}	± 20	Volts
Continuous Drain Current	I_D	30	Amps
Operating and Storage Temperature	T_{op} & T_{stg}	-55 to +150	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1	°C/W
Total Device Dissipation @ TC=25°C Total Device Dissipation @ TC=55°C	P_D	125 95	Watts

PACKAGE OUTLINE: MILPACK

PIN OUT:

PIN 1: DRAIN
PIN 2: SOURCE
PIN 3: GATE



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	DATA SHEET #: F00043 C	MED

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ELECTRICAL CHARACTERISTICS @ TJ=25°C (Unless Otherwise Specified)

RATING		SYMBOL	MIN	TYP	MAX	UNIT
Drain to Source Breakdown Voltage (VGS=0 V, ID=250μA)		**BVDSS**	100	---	---	**V**
Drain to Source on State Resistance (VGS=10 V, ID=20 A)		**RDS(on)**	---	---	0.055	**Ω**
On State Drain Current (VDS >ID(on) X RDS(on) Max, VGS=10 V		**ID(on)**	30	---	---	**A**
Gate Threshold Voltage (VDS=VGS, ID=250μA)		**VGS(th)**	2	---	4	**V**
Forward Transconductance (VDS >ID(on) X RDS(on) Max, IDS=20 A)		**gfs**	9	11	---	**S(℧)**
Zero Gate Voltage Drain Current (VDS=max rated voltage, VGS=0 V) (VDS=80% rated VDS, VGS=0 V, TA=125°C)		**IDSS**	--- ---	--- ---	250 1000	**μA**
Gate to Source Leakage Forward **Gate to Source Leakage Reverse**	At rated VGS	**IGSS**	--- ---	--- ---	100 100	**nA**
Total Gate Charge **Gate to Source Charge** **Gate to Drain Charge**	VGS=10 Volts 80% rated VDS Rated ID	**Qg** **Qgs** **Qgd**	--- --- ---	63 27 36	120 --- ---	**nC**
Turn on Delay Time **Rise Time** **Turn Off Delay Time** **Fall Time**	VDD= 24 V ID= 20 A RG= 6.2 Ω	**td(on)** **tr** **td(off)** **tf**	--- --- --- ---	--- --- --- ---	35 100 125 100	**nsec**
Diode Forward Voltage (IS= 40 A, VGS=0 V, TJ=25°C)		**VSD**	---	---	2.5	**V**
Diode Reverse Recovery Time **Reverse Recovery Charge**	TJ=25°C IF=40 A di/dt=100 A/μsec	**trr** **QRR**	--- ---	600 3.3	--- ---	**nsec** **μC**
Input Capacitance **Output Capacitance** **Reverse Transfer Capacitance**	VGS=0 Volts VDS=25 Volts f= 1 MHz	**Ciss** **Coss** **Crss**	--- --- ---	2000 1000 350	3000 1500 500	**pF**

For thermal derating curves and other characteristic curves please contact SSDI Marketing Department.