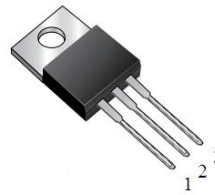
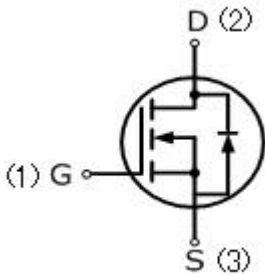


CURRENT 6 Ampere
 VOLTAGE RANG 600 Volts

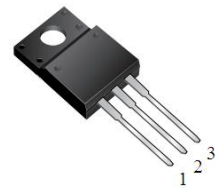
6N60

FEATURE

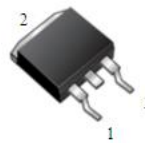
- 6A,600V, $R_{DS(ON)}=1.2\Omega @V_{GS}=10V/3A$
- Low gate charge
- Low C_{iss}
- Fast switching
- 100% avalanche tested
- Improved dv/dt capability



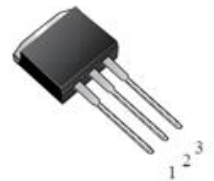
TO-220AB
6N60



ITO-220AB
6N60F



TO-263
6N60B



TO-262
6N60H

Absolute Maximum Ratings ($T_C=25^\circ\text{C}$, unless otherwise noted)			
Parameter	Symbol	6N60	UNIT
Drain-Source Voltage	V_{DSS}	600	V
Gate-Source Voltage	V_{GSS}	± 30	
Continuous Drain Current	I_D	6	A
Pulsed Drain Current (Note 1)	I_{DM}	24	
Single Pulse Avalanche Energy (Note 2)	E_{AS}	440	mJ
Avalanche Current (Note 1)	I_{AR}	10.4	A
Repetitive Avalanche Energy (Note 1)	E_{AR}	13	mJ
Reverse Diode dV/dt (Note 3)	dv/dt	5.0	V/ns
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$
Maximum lead temperature for soldering purposes, 1/8" from case for 5 seconds	T_L	260	$^\circ\text{C}$
Mounting Torque	6-32 or M3 screw	10	lbf • in
		1.1	N • m

Thermal Characteristics					
Parameter	Symbol	ITO-220	TO-220	TO-262 TO-263	Units
Maximum Junction-to-Case	R_{thJC}	1.25	1	1	$^\circ\text{C}/\text{W}$
Maximum Power Dissipation	P_D	100	125	125	W

CURRENT 6 Ampere
VOLTAGE RANG 600 Volts

6N60

Electrical Characteristics (T _c =25°C, unless otherwise noted)						
Parameter	Symbol	Test Conditions	Mix	Typ	Max	Units
Off Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =250uA	600	—	—	V
Breakdown Temperature Coefficient	ΔBV _{DSS} /ΔT _J	Reference to 25°C, I _D =250uA	—	0.53	—	V/°C
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =600V, V _{GS} =0V	—	—	1	uA
Gate-Body Leakage Current, Forward	I _{GSSF}	V _{GS} =30V, V _{DS} =0V	—	—	10	uA
Gate-Body Leakage Current, Reverse	I _{GSSR}	V _{GS} =-30V, V _{DS} =0V	—	—	-10	uA
On Characteristics						
Gate-Source Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250uA	2	—	4	V
Drain-Source On-State Resistance	R _{DS(on)}	V _{GS} =10V, I _D =3A	—	—	1.2	Ω
Dynamic Characteristics						
Input Capacitance	C _{iss}	V _{DS} =25V, V _{GS} =0V, f=1.0MHZ	—	—	1123	pF
Output Capacitance	C _{oss}		—	—	112	pF
Reverse Transfer Capacitance	C _{rss}		—	—	21	pF
Switching Characteristics						
Turn-On Delay Time	t _{d(on)}	V _{DD} =300V, I _D =6A, R _G =25Ω (Note4,5)	—	20	—	ns
Turn-On Rise Time	t _r		—	70	—	ns
Turn-Off Delay Time	t _{d(off)}		—	40	—	ns
Turn-Off Fall Time	t _f		—	45	—	ns
Total Gate Charge	Q _g	V _{DS} =480V, I _D =6A, V _{GS} =10V, (Note4,5)	—	22	—	nC
Gate-Source Charge	Q _{gs}		—	4.9	—	nC
Gate-Drain Charge	Q _{gd}		—	9.4	—	nC
Drain-Source Body Diode Characteristics and Maximum Ratings						
Continuous Diode Forward Current	I _S		—	—	6.0	A
Pulsed Diode Forward Current	I _{SM}		—	—	24	A
Diode Forward Voltage	V _{SD}	I _S =6A, V _{GS} =0V	—	—	1.4	V
Reverse Recovery Time	t _{rr}	V _{GS} =0V, I _S =6A,	—	290	—	ns
Reverse Recovery Charge	Q _{rr}	dI _F /dt=100A/us, (Note4)	—	2.35	—	uC

Notes

1. Repetitive Rating: pulse width limited by maximum junction temperature.
2. V_{DD}=50V, starting, L=24mH, R_g=25Ω, I_{AS}=6A, T_J=25°C.
3. I_{SD}≤I_D, dI/dt=200A/us, V_{DD}≤BV_{DSS}, starting T_J=25°C.
4. Pulse width≤300us; duty cycle≤2%.
5. Repetitive rating; pulse width limited by maximum junction temperature.