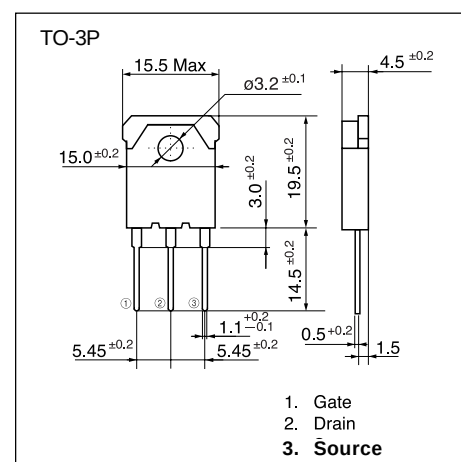


N-CHANNEL SILICON POWER MOS-FET**■ Features**

High speed switching
 Low on-resistance
 No secondary breakdown
 Low driving power
 Avalanche-proof

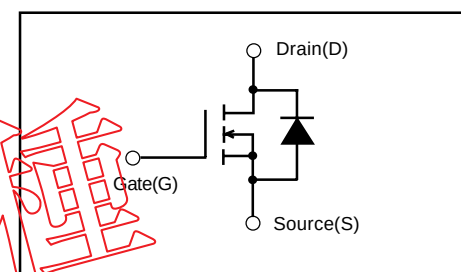
■ Applications

Switching regulators
 UPS (Uninterruptible Power Supply)
 DC-DC converters

**■ Maximum ratings and characteristic Absolute maximum ratings****● (Tc=25°C unless otherwise specified)**

Item	Symbol	Rating	Unit
Drain-source voltage	V_{DS}	60	V
Continuous drain current	I_D	±100	A
Pulsed drain current	$I_{D(puls)}$	±400	A
Gate-source voltage	V_{GS}	±30	V
Maximum Avalanche Energy	E_{AV}^{*1}	1268.3	mJ
Max. power dissipation	P_D	150	W
Operating and storage temperature range	T_{ch} T_{sto}	-55 to +150	°C

*1 L=0.169mH, Vcc=24V

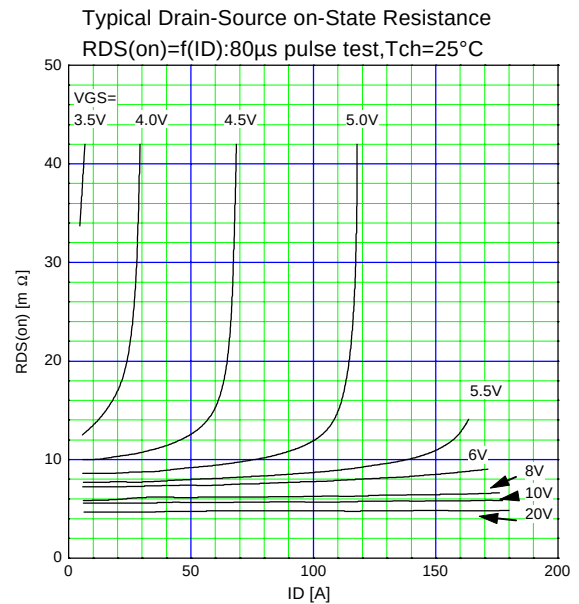
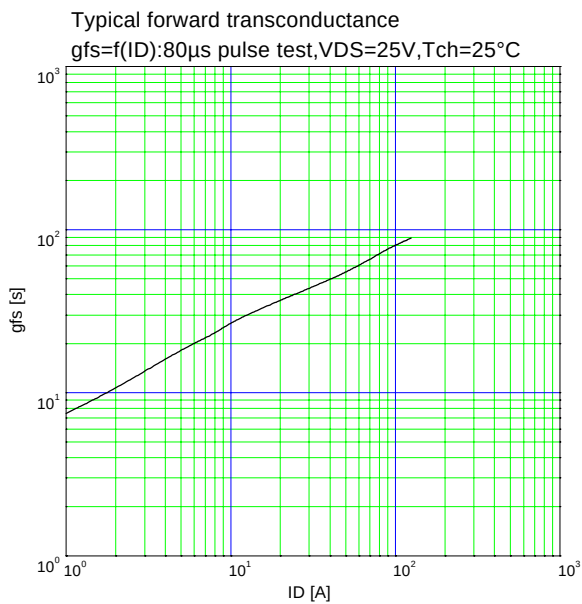
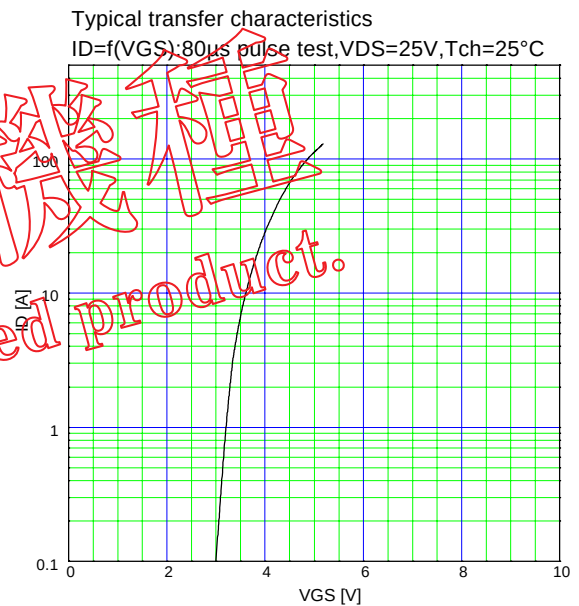
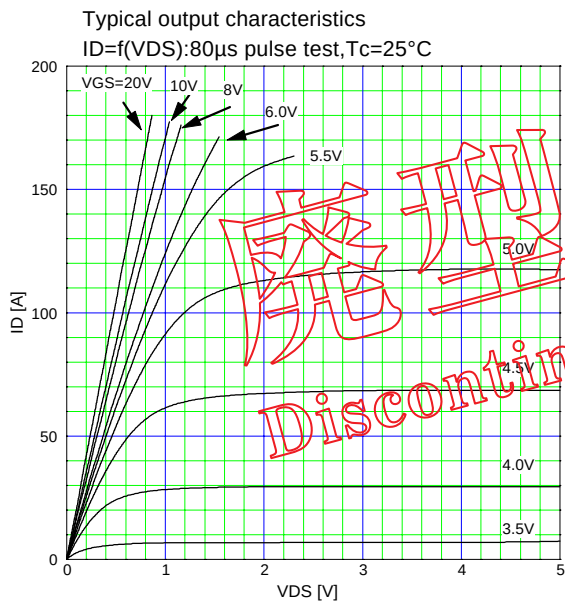
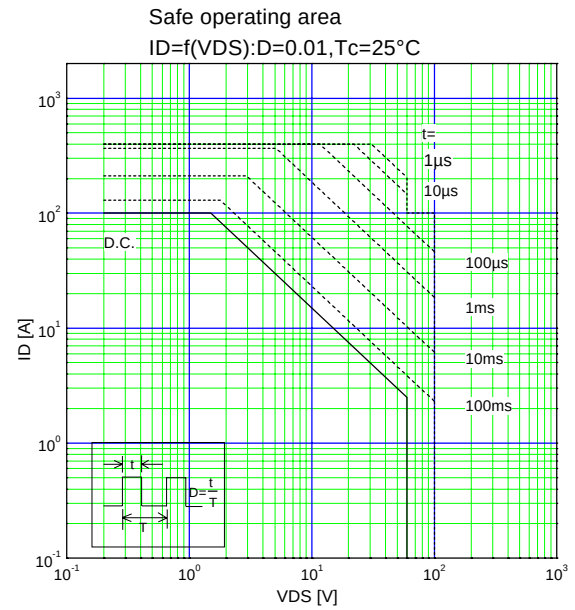
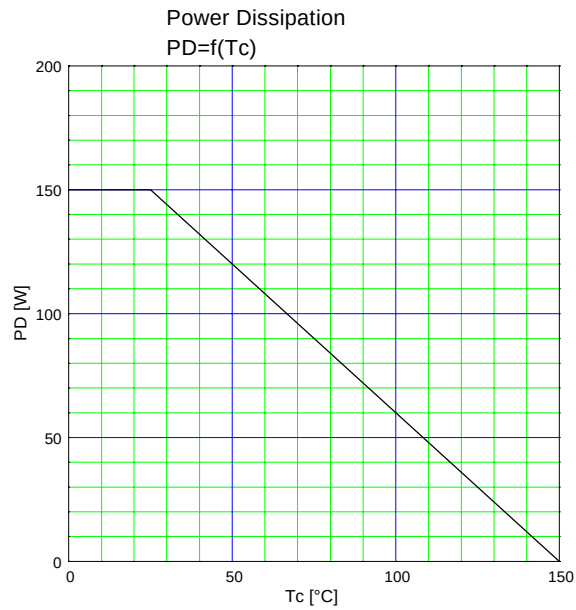
■ Equivalent circuit schematic**● Electrical characteristics (Tc=25°C unless otherwise specified)**

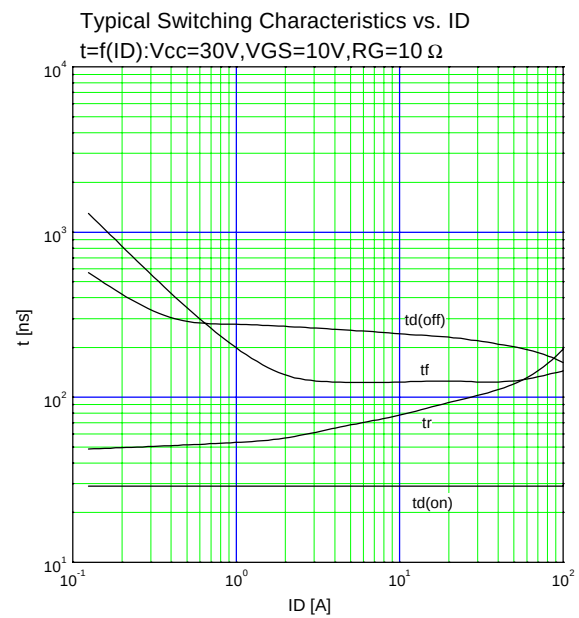
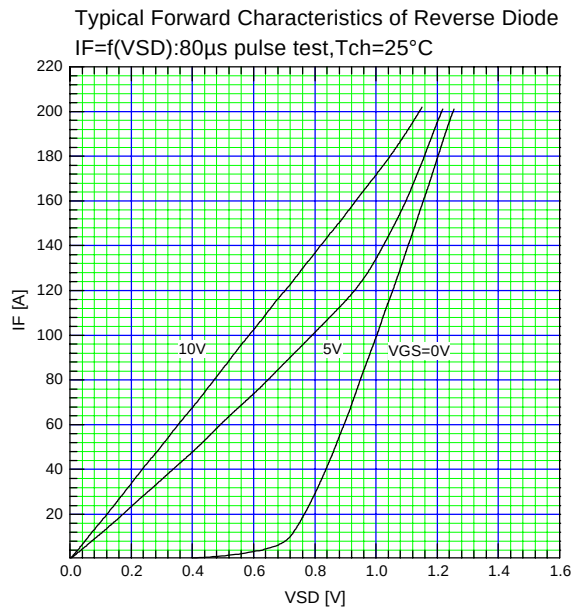
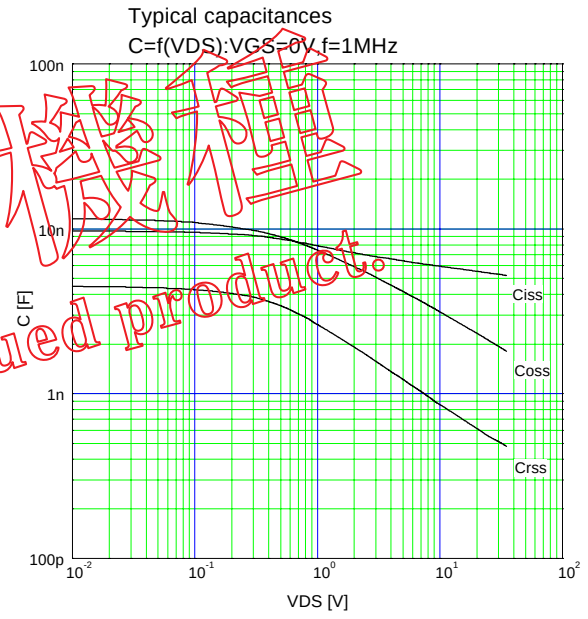
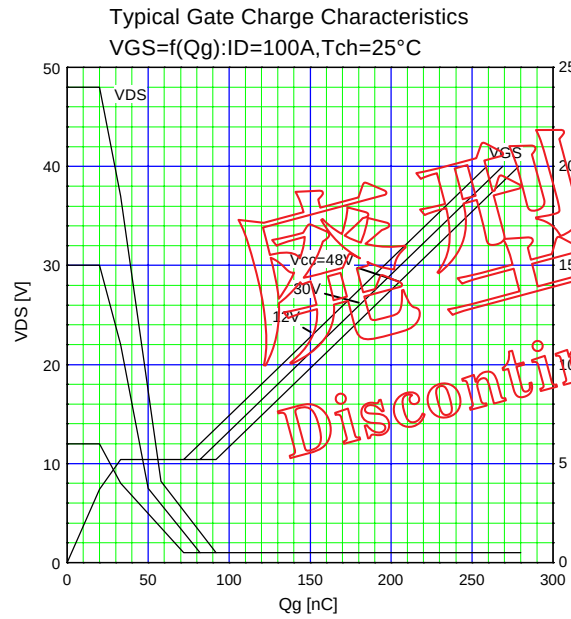
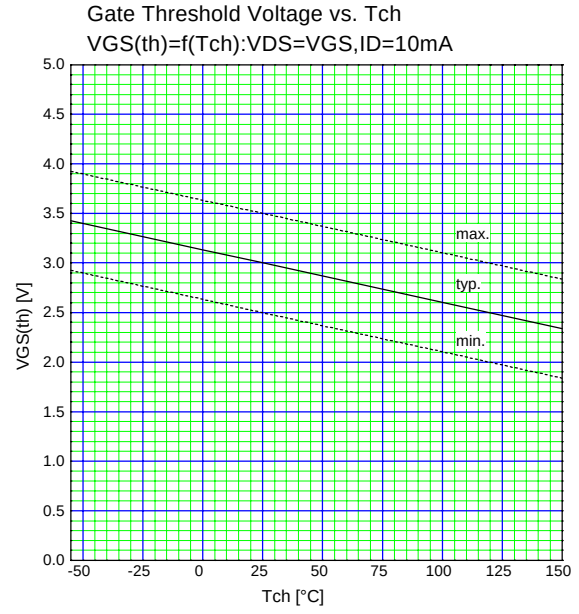
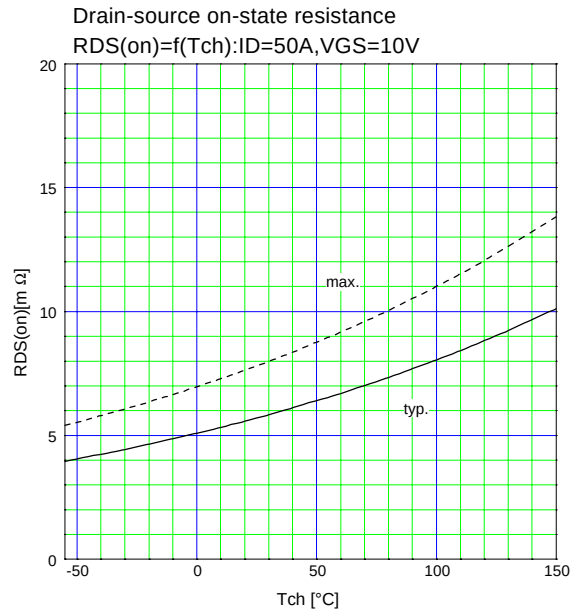
Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Drain-source breakdown voltage	BV_{DS}	$I_D=1mA$ $V_{GS}=0V$	60			V
Gate threshold voltage	$V_{GS(th)}$	$I_D=10mA$ $V_{DS}=V_{GS}$	2.5	3.0	3.5	V
Zero gate voltage drain current	I_{DSS}	$V_{DS}=60V$ $V_{GS}=0V$		10	500	μA
				0.2	1.0	mA
Gate-source leakage current	I_{GSS}	$V_{GS}=±30V$ $V_{DS}=0V$		10	100	nA
Drain-source on-state resistance	$R_{DS(on)}$	$I_D=50A$ $V_{GS}=10V$		5.7	7.8	mΩ
Forward transconductance	g_{fs}	$I_D=50A$ $V_{DS}=25V$	25	55		S
Input capacitance	C_{iss}	$V_{DS}=25V$		5400	8100	pF
Output capacitance	C_{oss}	$V_{GS}=0V$		2100	3150	pF
Reverse transfer capacitance	C_{rss}	$f=1MHz$		550	830	pF
Turn-on time t_{on}	$t_{d(on)}$	$V_{CC}=30V$ $I_D=100A$ $V_{GS}=10V$		29	50	ns
	t_r			200	350	ns
Turn-off time t_{off}	$t_{d(off)}$	$R_{GS}=10\Omega$		160	240	ns
	t_f			150	230	ns
Avalanche capability	I_{AV}	$L=100\mu H$ $T_{ch}=25°C$	100			A
Diode forward on-voltage	V_{SD}	$I_F=100A$ $V_{GS}=0V$ $T_{ch}=25°C$		1.0	1.5	V
Reverse recovery time	t_{rr}	$I_F=50A$ $V_{GS}=0V$		85		ns
Reverse recovery charge	Q_{rr}	$-di/dt=100A/\mu s$ $T_{ch}=25°C$		0.21		μC

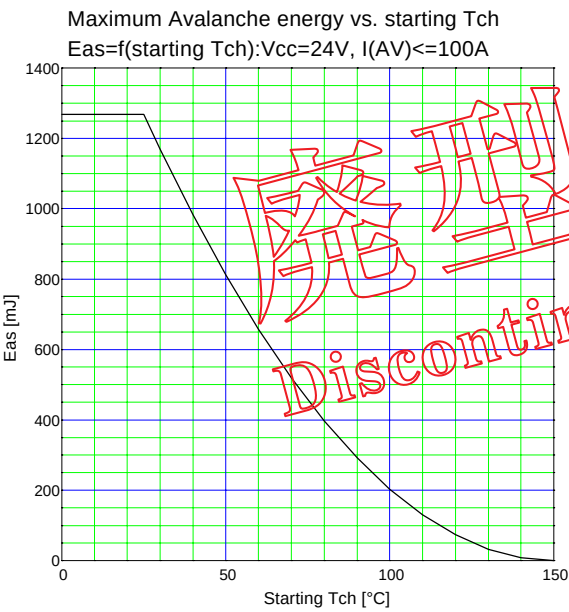
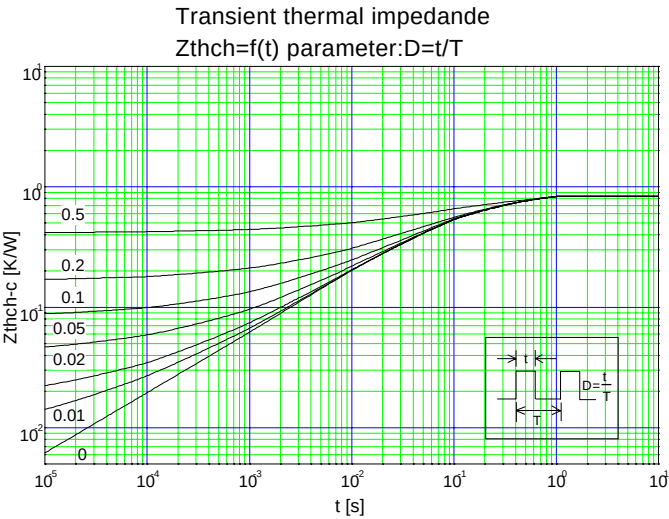
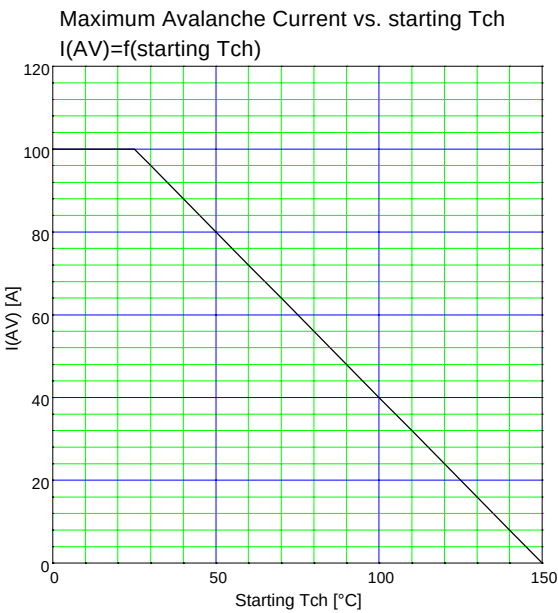
● Thermal characteristics

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal resistance	$R_{th(ch-c)}$	channel to case			0.83	°C/W
	$R_{th(ch-a)}$	channel to ambient			35.0	°C/W

Characteristics







廢型機種
Discontinued product.