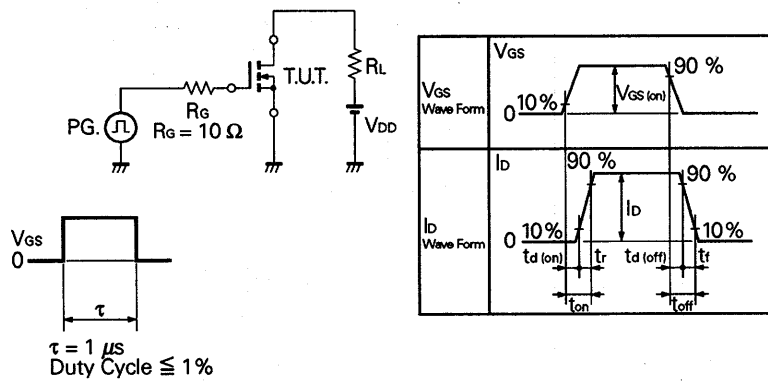


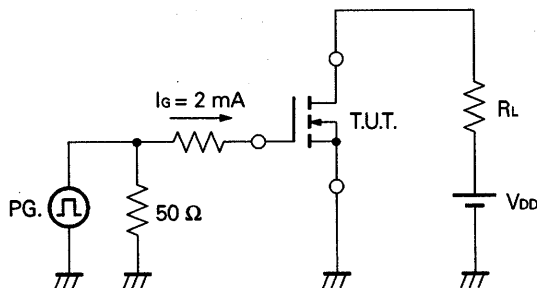
ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Drain to Source On-state Resistance	R _{DS(on)}		0.12	0.15	Ω	V _{GS} = 10 V, I _D = 8 A
Drain to Source On-state Resistance	R _{DS(on)}		0.15	0.2	Ω	V _{GS} = 4.0 V, I _D = 8 A
Gate to Source Cutoff Voltage	V _{GS(off)}	1.0		2.5	V	V _{DS} = 10 V, I _D = 1 mA
Forward Transfer Admittance	y _{fs}	7.0	14		S	V _{DS} = 10 V, I _D = 8 A
Drain Leakage Current	I _{DSS}			10	μA	V _{DS} = 100 V, V _{GS} = 0
Gate to Source Leakage Current	I _{GSS}			±10	μA	V _{GS} = ±20 V, V _{DS} = 0
Input Capacitance	C _{iss}		1 400		pF	V _{DS} = 10 V
Output Capacitance	C _{oss}		350		pF	V _{GS} = 0
Reverse Transfer Capacitance	C _{rss}		50		pF	f = 1 MHz
Turn-On Delay Time	t _{d(on)}		25		ns	V _{GS(on)} = 10 V V _{DD} = 50 V I _D = 10 A, R _G = 10 Ω R _L = 5.0 Ω
Rise Time	t _r		110		ns	
Turn-Off Delay Time	t _{d(off)}		100		ns	
Fall Time	t _f		65		ns	
Total Gate Charge	Q _G		30		nC	V _{GS} = 10 V I _D = 20 A V _{DD} = 80 V
Gate to Source Charge	Q _{GS}		5		nC	
Gate to Drain Charge	Q _{GD}		10		nC	
Diode Forward Voltage	V _{SD}		1.1		V	I _{SD} = 15 A, V _{GS} = 0
Reverse Recovery Time	t _{rr}		200		ns	I _F = 20 A, V _{GS} = 0 di/dt = 50 A/μs
Reverse Recovery Charge	Q _{rr}		500		nC	

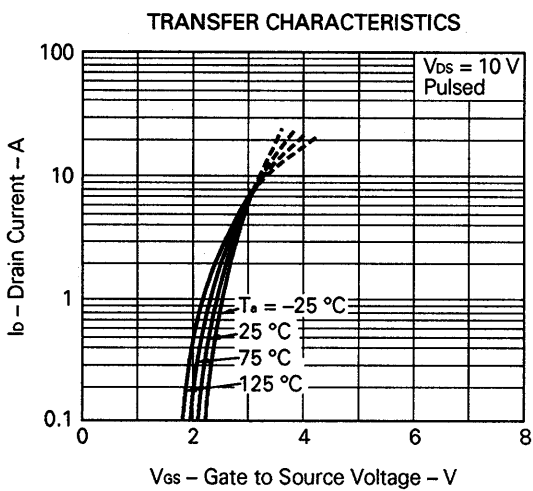
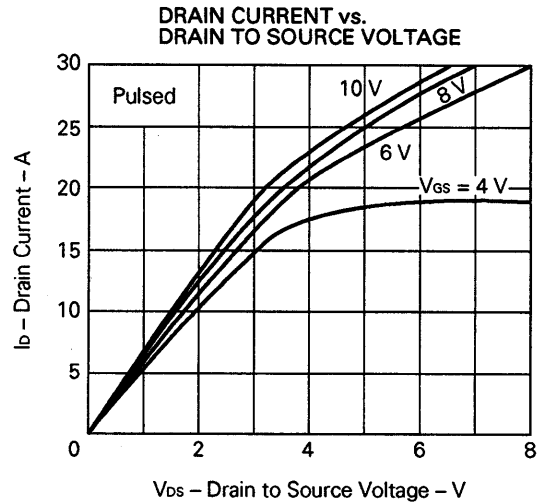
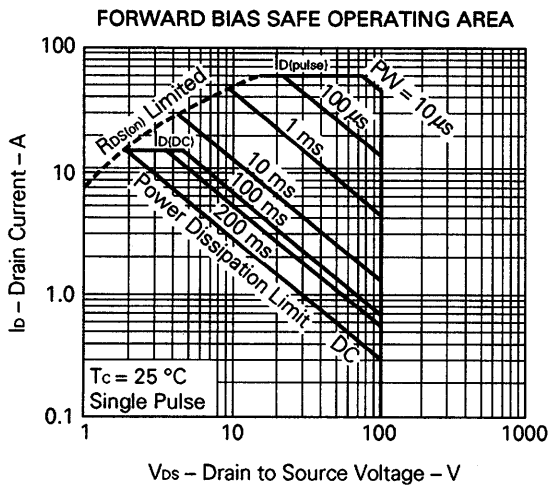
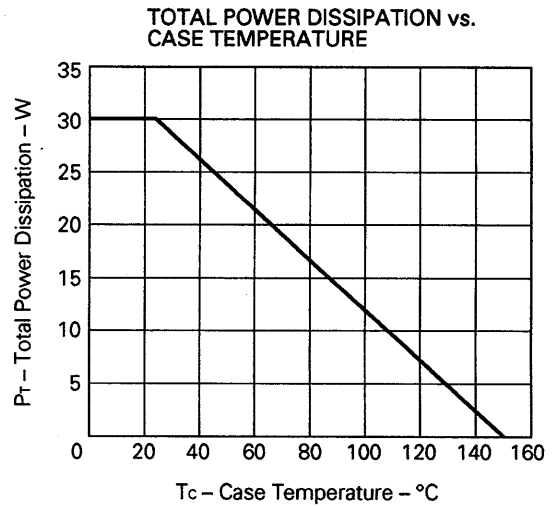
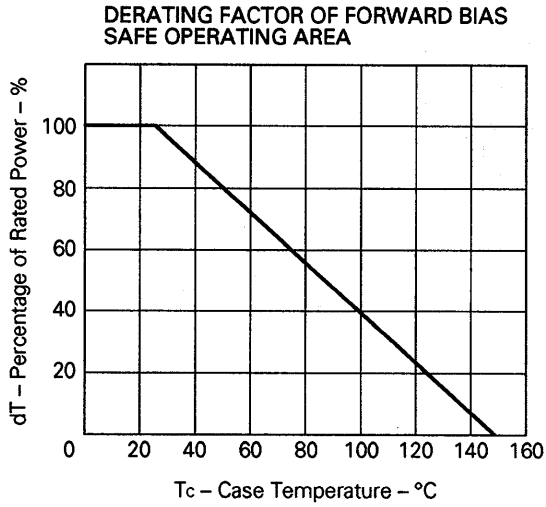
Test Circuit 1: Switching Time



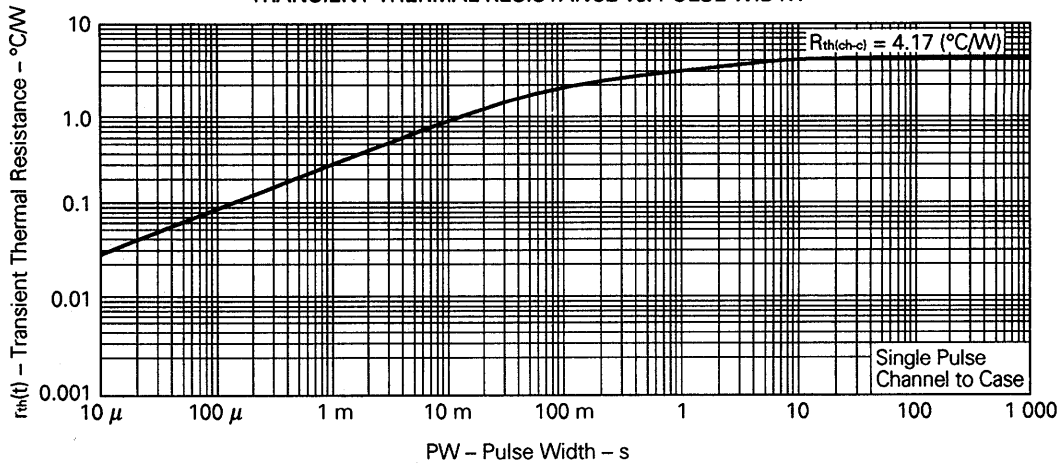
Test Circuit 2: Gate Charge



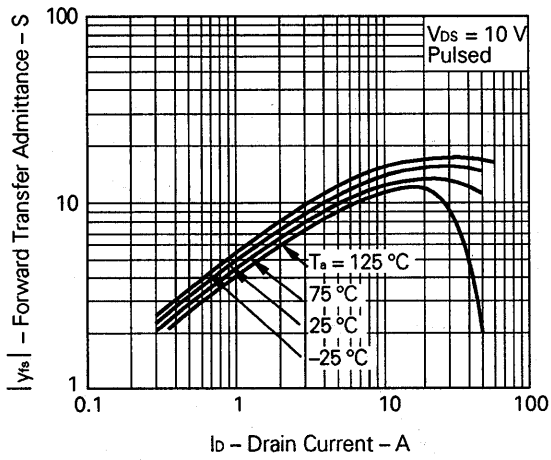
TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)



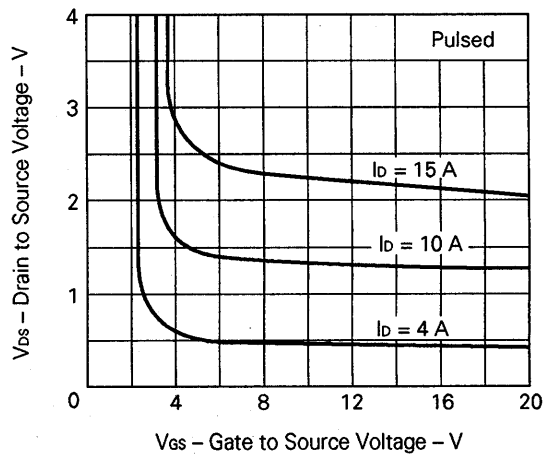
TRANSIENT THERMAL RESISTANCE vs. PULSE WIDTH



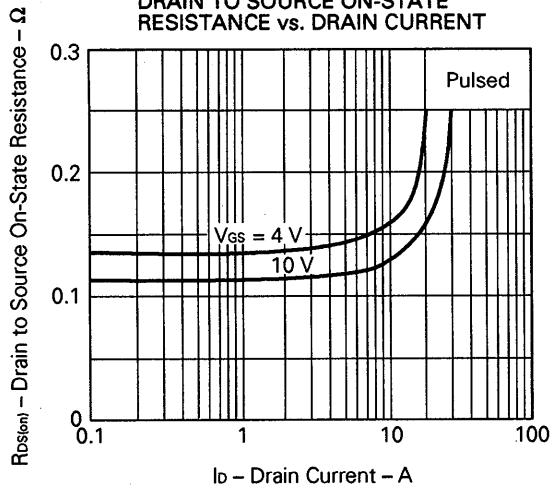
FORWARD TRANSFER ADMITTANCE vs. DRAIN CURRENT



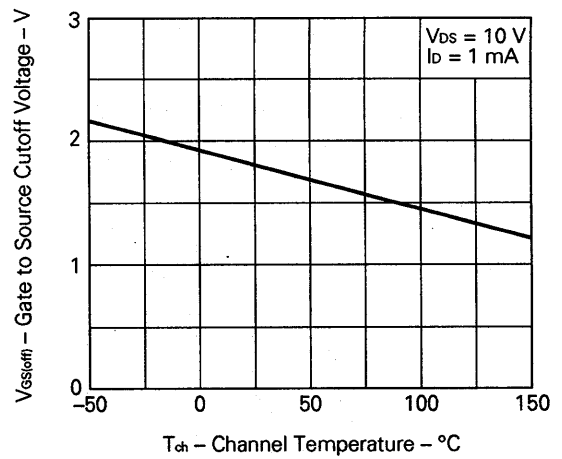
DRAIN TO SOURCE VOLTAGE vs. GATE TO SOURCE VOLTAGE



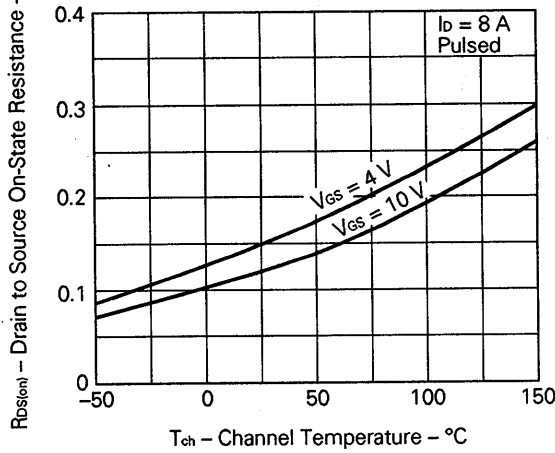
DRAIN TO SOURCE ON-STATE RESISTANCE vs. DRAIN CURRENT



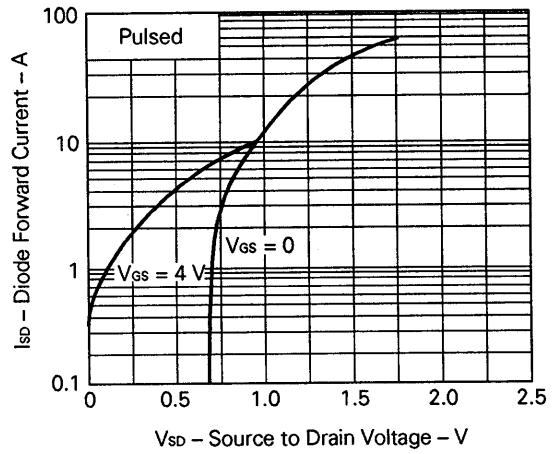
GATE TO SOURCE CUTOFF VOLTAGE vs. CHANNEL TEMPERATURE



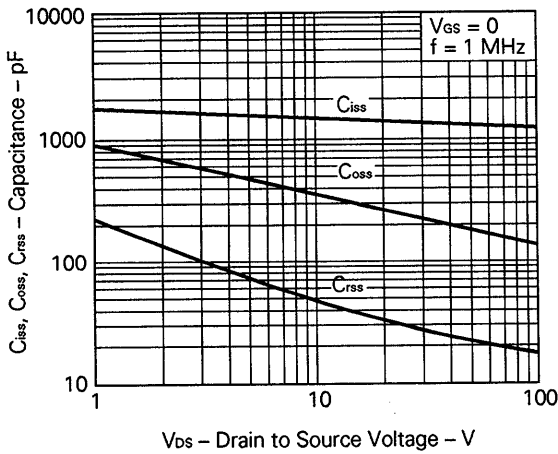
DRAIN TO SOURCE ON-STATE RESISTANCE vs. CHANNEL TEMPERATURE



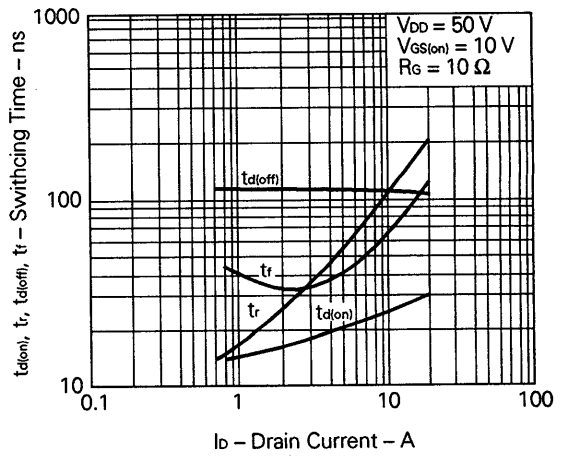
SOURCE TO DRAIN DIODE FORWARD VOLTAGE



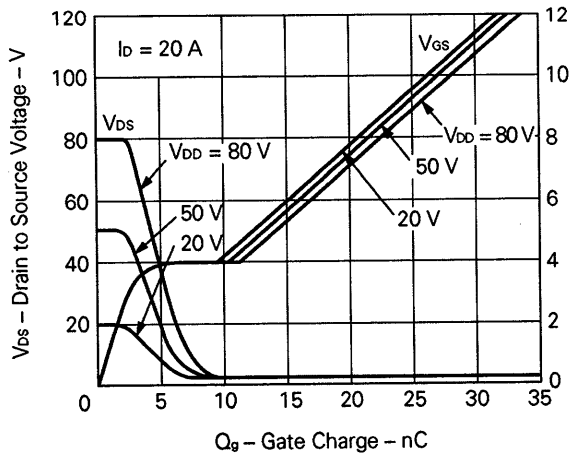
CAPACITANCE vs. DRAIN TO SOURCE VOLTAGE



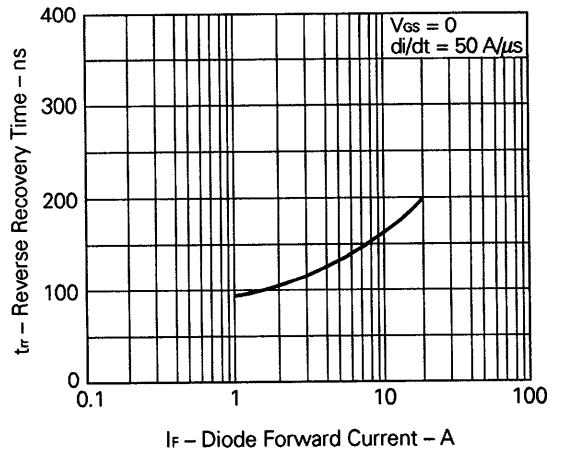
SWITCHING CHARACTERISTICS



DYNAMIC INPUT CHARACTERISTICS



REVERSE RECOVERY TIME vs. DIODE FORWARD CURRENT



Reference

Application note name	No.
Safe operating area of Power MOS FET.	TEA-1034
Application circuit using Power MOS FET.	TEA-1035
Quality control of NEC semiconductors devices.	TEI-1202
Quality control guide of semiconductors devices.	MEI-1202
Assembly manual of semiconductors devices.	IEI-1207

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