

/ Absolute Maximum Ratings(Tc=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	650	V
Continuous DC Drain Current for $R_{th(j-c,typ.)}$, Limited by $T_{VJ(max)}$	$I_D(Tc=25)$	7	A
	$I_D(Tc=100)$	5.7	A
Peak Drain Current, tp Limited by $T_{VJ(max)}$	I_{DM}	12	A
Gate-Source Max Voltage	$V_{GS,max}$	-10/+22	V
Gate-Source Operate Voltage	$V_{GS,op}$	0/+15	V
Single Pulse Avalanche Energy	E_{AS}	10.2	mJ
Power Dissipation or $R_{th(j-c,typ.)}$	$P_D(Tc=25)$	23	W
Operating and Storage Temperature Range	T_{VJ}, T_{STG}	-55 to 175	
MOSFET/Body Diode Junction-Case Thermal Resistance	$R_{th(j-c)}$	6.52	/W

/ Electrical Characteristics(Tc=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=100\mu A$	650			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=3.5mA$	3		5	V
Drain-Source Leakage Current	I_{DSS}	$V_{DS}=650V$ $V_{GS}=0V$		0.1	20	μA
Gate-Source Leakage Current	I_{GSS}	$V_{GS}=22V$ $V_{DS}=0V$			250	nA
Source-Gate Leakage Current	I_{SGS}	$V_{GS}=-10V$ $V_{DS}=0V$			250	nA
Drain-Source On-State Resistance	$R_{DS(on)}$	$V_{GS}=15V$ $I_D=4A$		500	650	m Ω
		$V_{GS}=15V$ $I_D=4A$ $T_{VJ}=175$		509		
		$V_{GS}=18V$ $I_D=4A$		378	600	
		$V_{GS}=18V$ $I_D=4A$ $T_{VJ}=175$		454		
Body Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=2A$		3.8		V
Continuous DC Source Current	I_S			6		A
Peak Reverse Drain Current	I_{SM}			12		A
Reverse Recovery Time	t_{rr}	$V_{GS}=0V$, $I_{SD}=4A$, $V_R=400V$, $di/dt=1.1kA/us$		7.9		ns
Reverse Recovery Charge	Q_{rr}			20		nC
Peak Reverse Recovery Current	I_{rrm}			4.2		A
Reverse Recovery Energy	E_{rr}			0.19		μJ

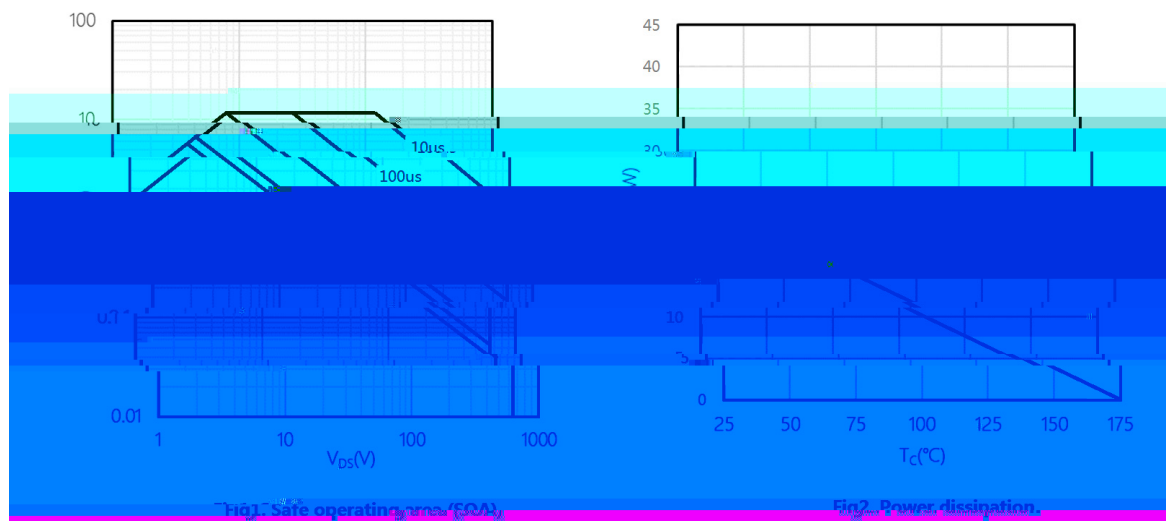
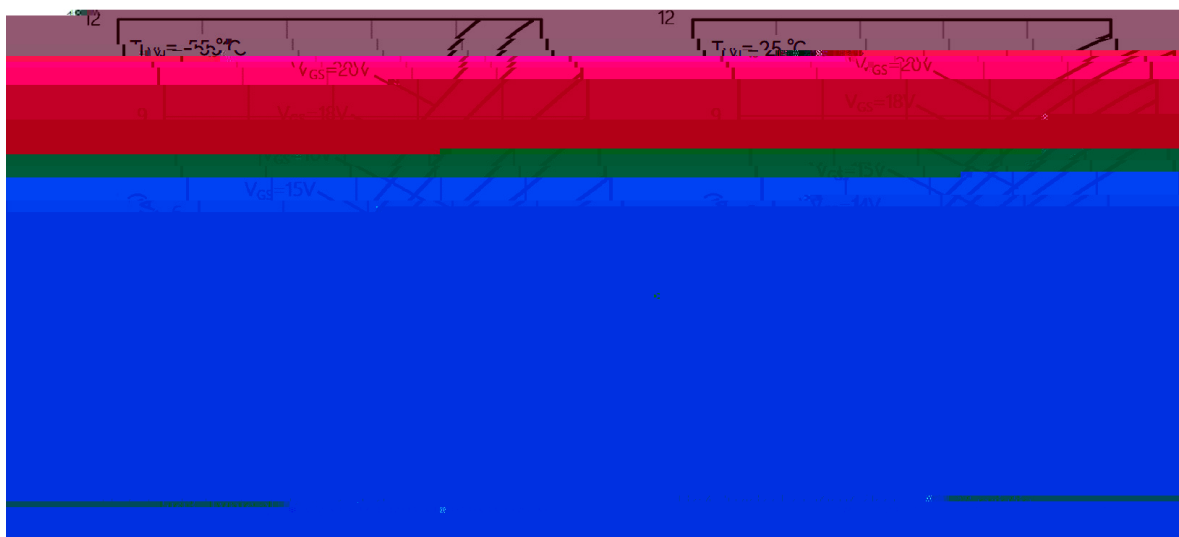
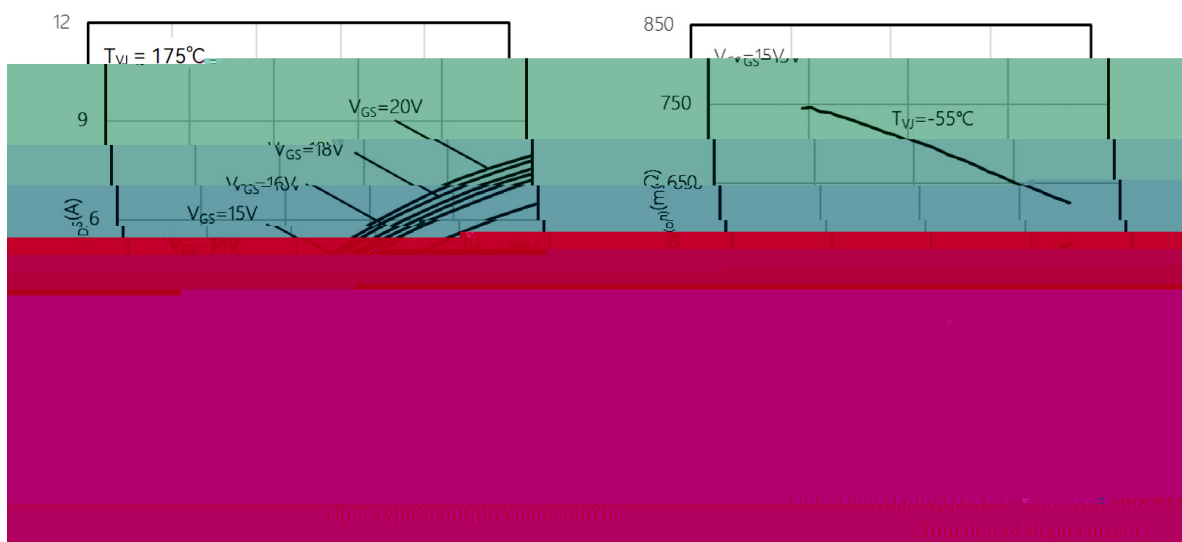
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/ Electrical Characteristic Curve



Electrical Characteristic Curve

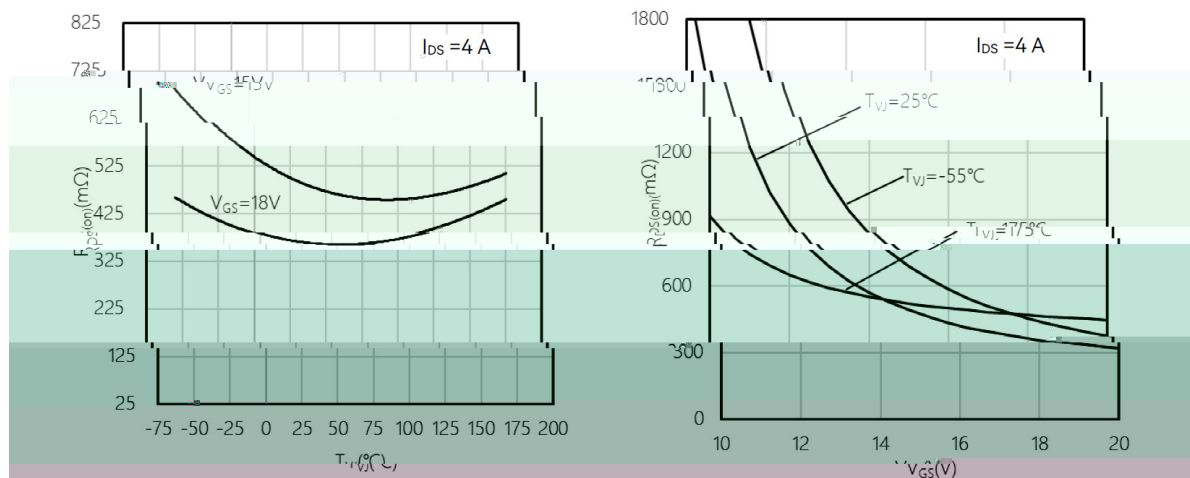


Fig.7 Typical on-state resistance as a function of temperature

Fig.8 Typical on-state resistance as a function of V_{GS}

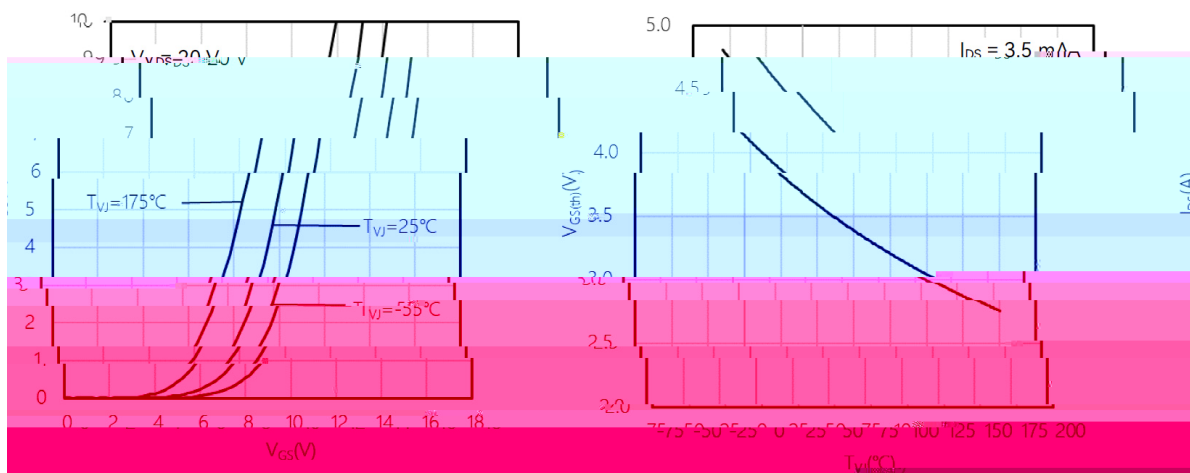


Fig.9 Typical transfer curves for threshold voltage

Fig.10 Typical load-line curves for threshold voltage

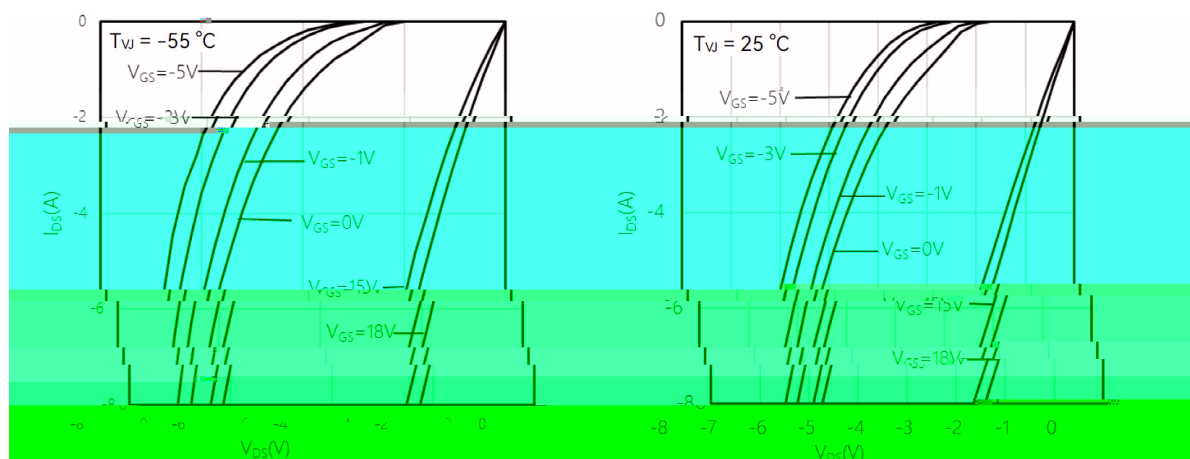
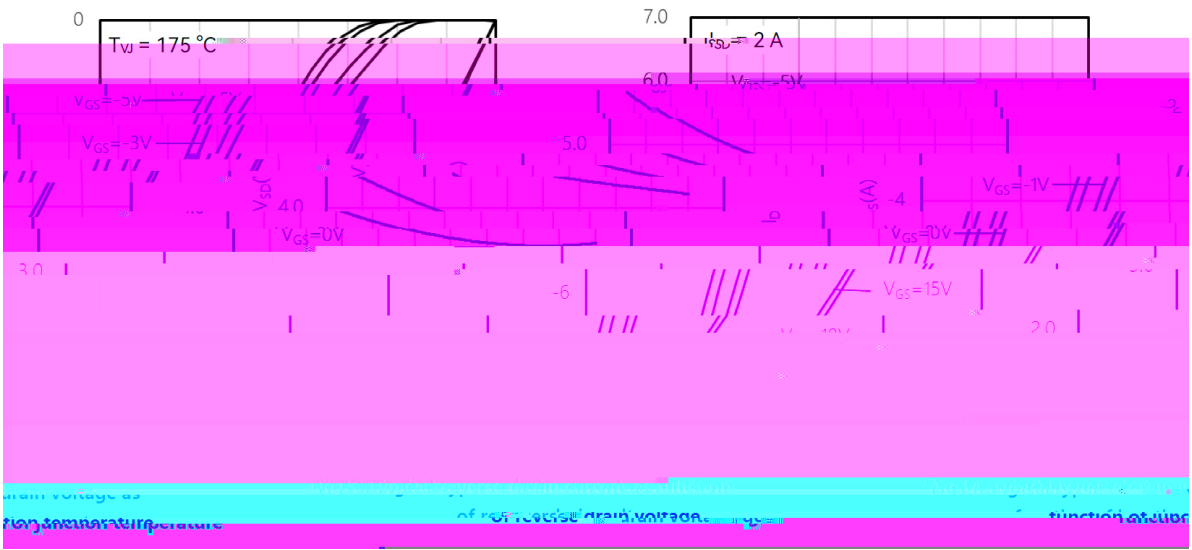
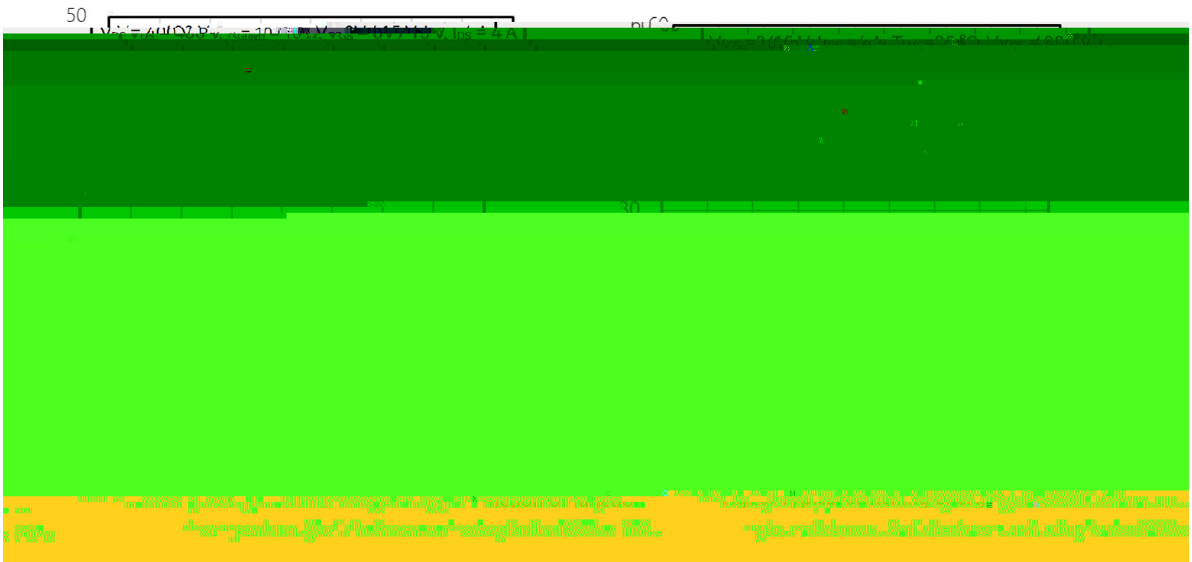
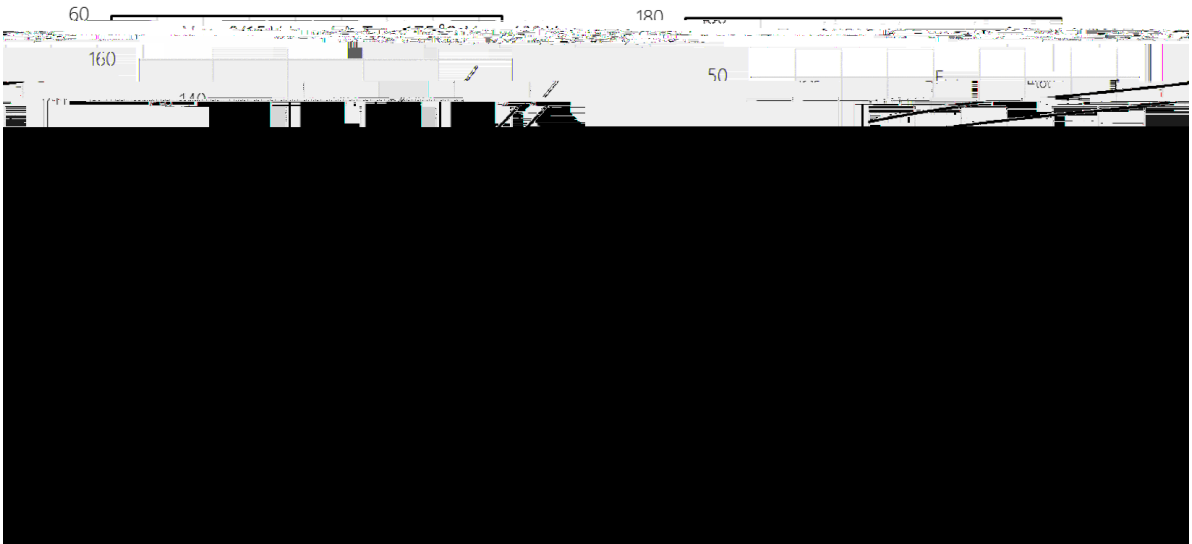


Fig.11 Typical pulsed reverse characteristics for reverse current

Fig.12 Typical pulsed reverse characteristics for reverse current

/ Electrical Characteristic Curve



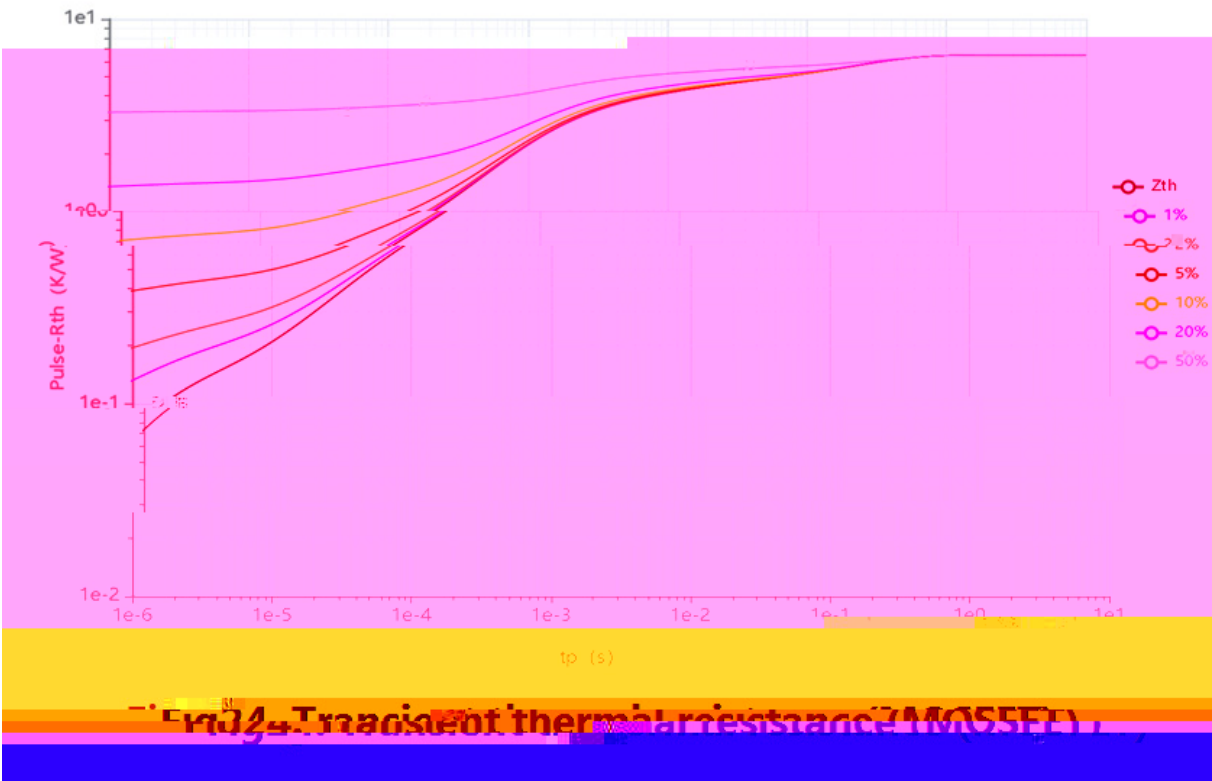
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