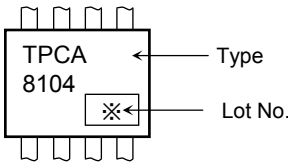


Thermal Characteristics

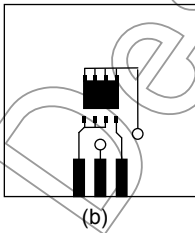
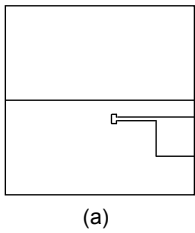
Characteristic	Symbol	Max	Unit
Thermal resistance, channel to case (Tc = 25°C)	R _{th (ch-c)}	2.78	°C/W
Thermal resistance, channel to ambient (t = 10 s) (Note 2a)	R _{th (ch-a)}	44.6	°C/W
Thermal resistance, channel to ambient (t = 10 s) (Note 2b)	R _{th (ch-a)}	78.1	

Marking (Note 5)



Note 1: The channel temperature should not exceed 150°C during use.

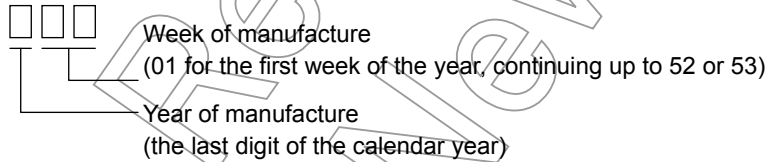
Note 2: (a) Device mounted on a glass-epoxy board (a) (b) Device mounted on a glass-epoxy board (b)



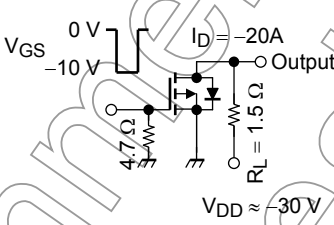
Note 3: V_{DD} = -24 V, T_{ch} = 25°C (initial), L = 0.1 mH, R_G = 25 Ω, I_{AR} = -40 A

Note 4: Repetitive rating: pulse width limited by maximum channel temperature.

Note 5: * Weekly code (three digits):

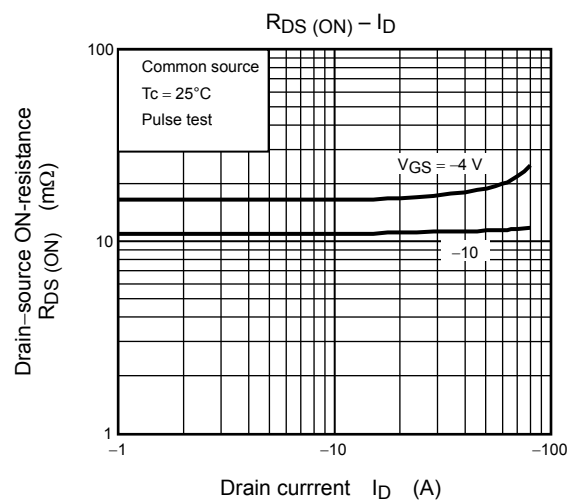
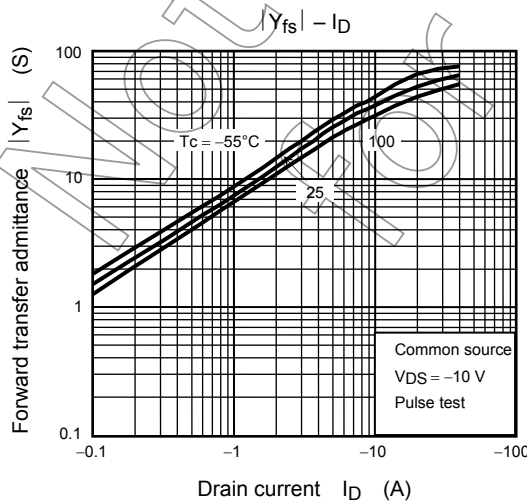
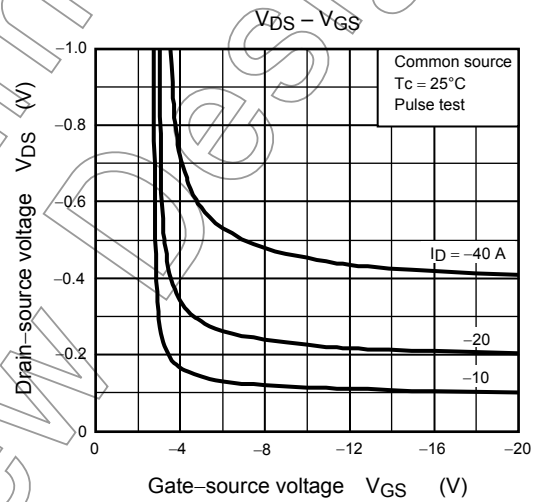
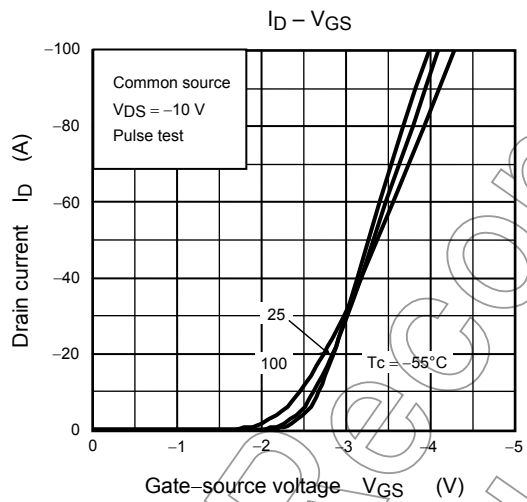
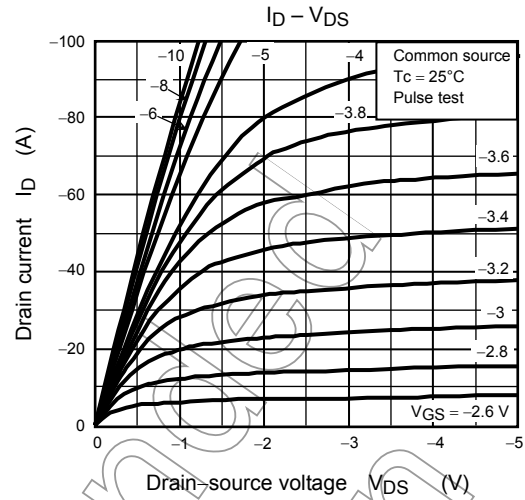
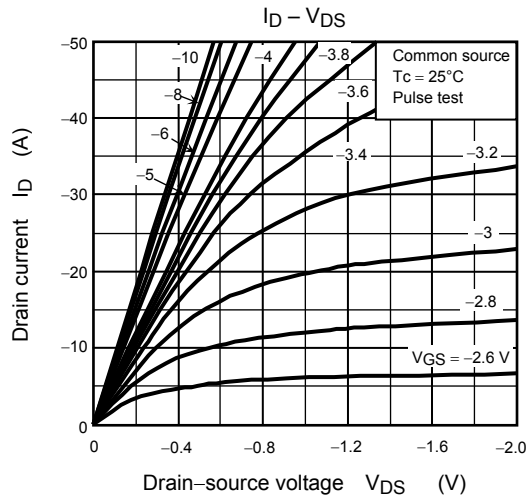


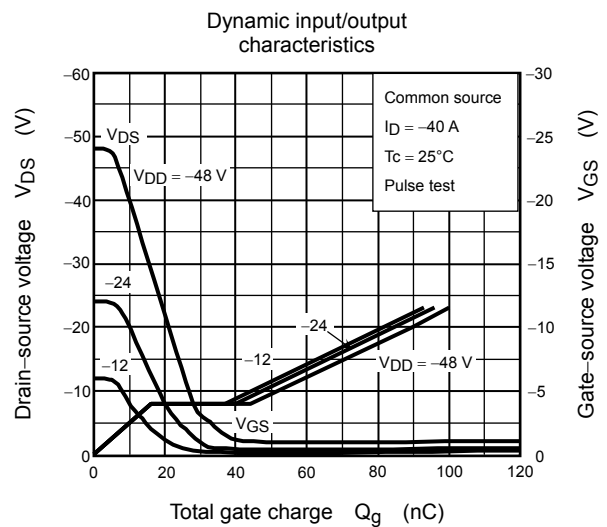
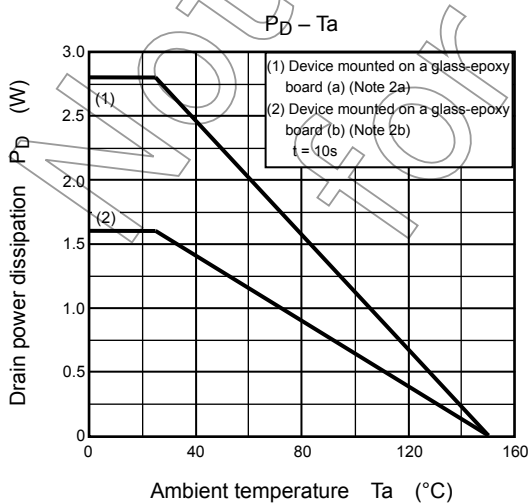
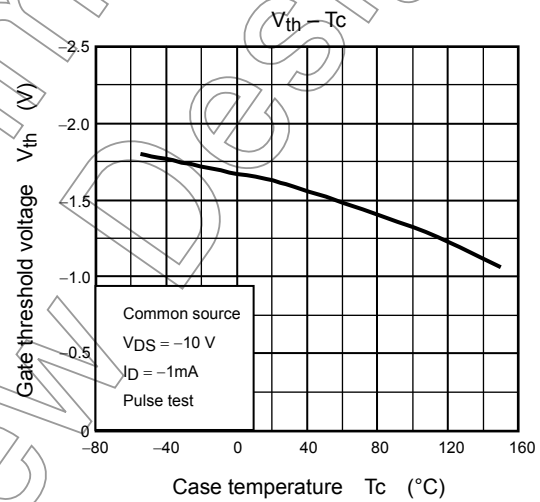
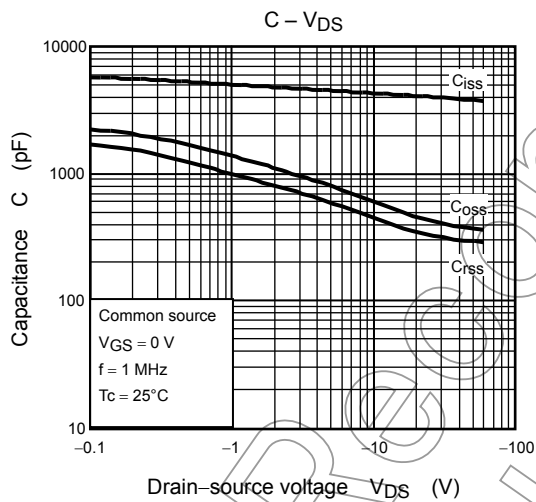
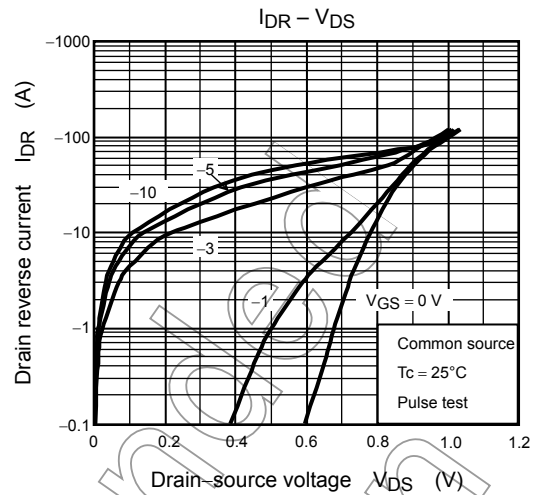
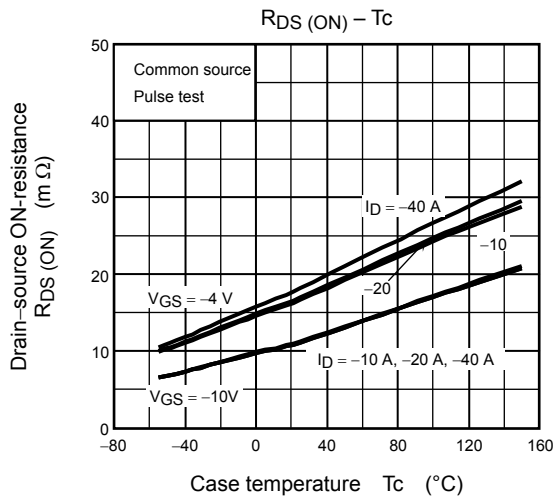
Electrical Characteristics (Ta = 25°C)

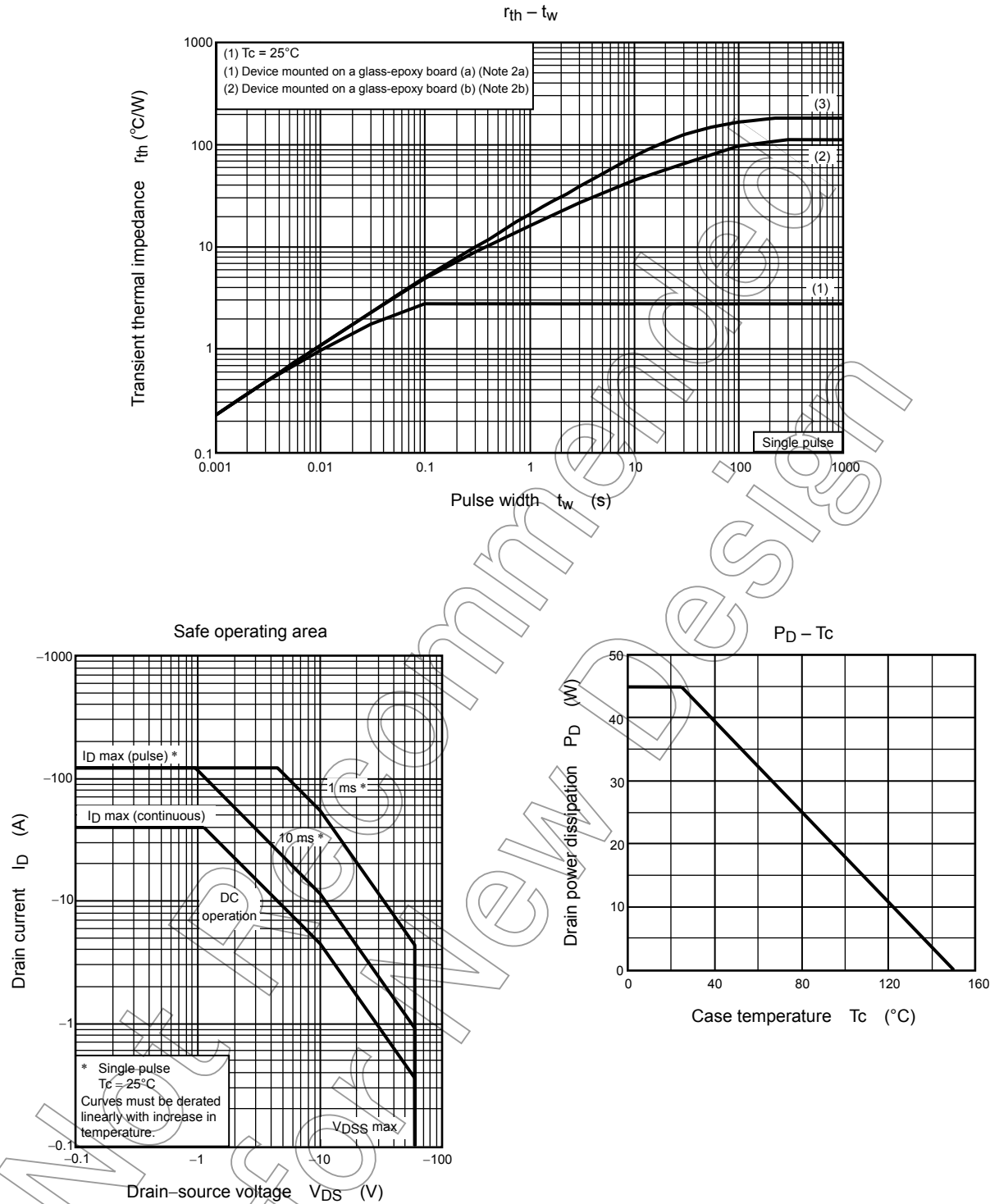
Characteristic		Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current		I_{GSS}	$V_{GS} = \pm 16 \text{ V}, V_{DS} = 0 \text{ V}$	—	—	± 10	μA
Drain cutoff current		I_{DSS}	$V_{DS} = -60 \text{ V}, V_{GS} = 0 \text{ V}$	—	—	-10	μA
Drain-source breakdown voltage		$V_{(BR)DSS}$	$I_D = -10 \text{ mA}, V_{GS} = 0 \text{ V}$	-60	—	—	V
		$V_{(BR)DSX}$	$I_D = -10 \text{ mA}, V_{GS} = 20 \text{ V}$	-35	—	—	
Gate threshold voltage		V_{th}	$V_{DS} = -10 \text{ V}, I_D = -1 \text{ mA}$	-0.8	—	-2.0	V
Drain-source ON-resistance		$R_{DS(ON)}$	$V_{GS} = -4 \text{ V}, I_D = -20 \text{ A}$	—	17	24	m Ω
			$V_{GS} = -10 \text{ V}, I_D = -20 \text{ A}$	—	11	16	
Forward transfer admittance		$ Y_{fs} $	$V_{DS} = -10 \text{ V}, I_D = -20 \text{ A}$	25	50	—	S
Input capacitance		C_{iss}	$V_{DS} = -10 \text{ V}, V_{GS} = 0 \text{ V}, f = 1 \text{ MHz}$	—	4300	—	pF
Reverse transfer capacitance		C_{rss}		—	450	—	
Output capacitance		C_{oss}		—	600	—	
Switching time	Rise time	t_r		—	10	—	ns
	Turn-on time	t_{on}		—	20	—	
	Fall time	t_f		—	60	—	
	Turn-off time	t_{off}		—	200	—	
Total gate charge (gate-source plus gate-drain)		Q_g	$V_{DD} \approx -48 \text{ V}, V_{GS} = -10 \text{ V}$ $I_D = -40 \text{ A}$	—	90	—	nC
Gate-source charge 1		Q_{gs1}		—	16	—	
Gate-drain ("Miller") charge		Q_{gd}		—	28	—	

Source-Drain Ratings and Characteristics (Ta = 25°C)

Characteristic		Symbol	Test Condition	Min	Typ.	Max	Unit
Drain reverse current	Pulse (Note 1)	I_{DRP}	—	—	—	-120	A
Forward voltage (diode)		V_{DSF}	$I_{DR} = -40 \text{ A}, V_{GS} = 0 \text{ V}$	—	—	1.2	V







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