

RoHS Compliant Product
A suffix of "-C" specifies halogen and lead-free

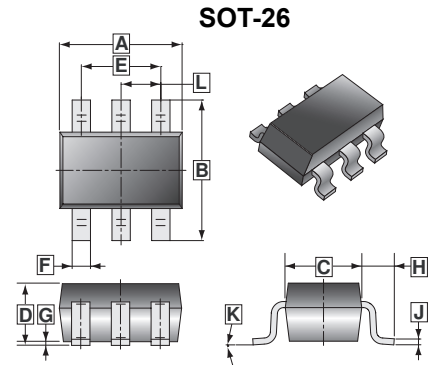
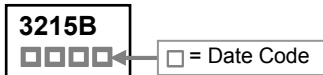
DESCRIPTION

SST3215B provides designers with the best combination of fast switching, low on-resistance and cost-effectiveness. SOT-26 package is universally used for all commercial-industrial surface mount applications.

FEATURES

- 150V/2.2A
 $R_{DS(ON)} \leq 320m\Omega @ V_{GS}=10V$
 $R_{DS(ON)} \leq 380m\Omega @ V_{GS}=4.5V$
- Reliable and rugged
- Green device available

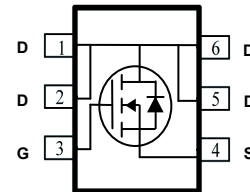
MARKING



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	0	0.10
B	2.60	3.00	H	0.60	REF.
C	1.40	1.80	J	0.12	REF.
D	1.30 MAX.		K	0°	10°
E	1.90 REF.		L	0.95 REF.	
F	0.30	0.50			

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-26	3K	7 inch



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	150	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current, $V_{GS}=10V$ ¹	I_D	$T_C=25^\circ C$	2.2
		$T_C=75^\circ C$	1.8
		$T_A=25^\circ C$	1.7
		$T_A=75^\circ C$	1.4
Pulsed Drain Current ²	I_{DM}	8	A
Power Dissipation	P_D	$T_C=25^\circ C$	3.2
		$T_A=25^\circ C$	2
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~150	$^\circ C$
Thermal Resistance Rating			
Thermal Resistance Junction to Ambient ¹	$R_{\theta JA}$	$t \leq 5sec$	62.5
		Steady State	125
Thermal Resistance Junction to Ambient			156
Thermal Resistance Junction to Case ¹	$R_{\theta JC}$	39	$^\circ C / W$

ELECTRICAL CHARACTERISTICS (T_J=25°C unless otherwise specified)

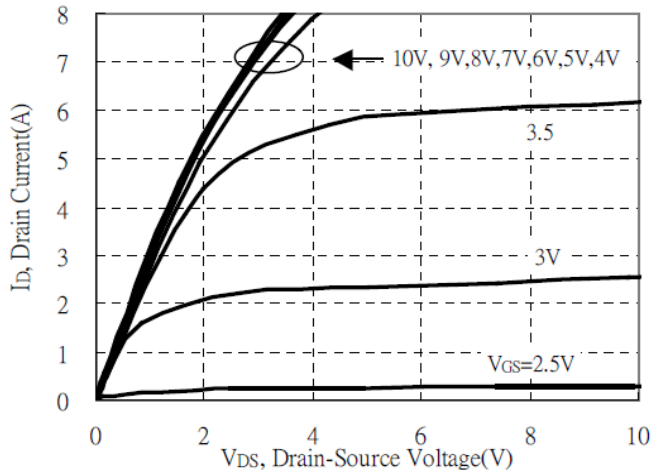
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Drain-Source Breakdown Voltage	BV _{DSS}	150	-	-	V	V _{GS} =0, I _D =250μA
Gate-Threshold Voltage	V _{GS(th)}	1	-	2.5	V	V _{DS} =V _{GS} , I _D =250μA
Gate-Body Leakage Current	I _{GSS}	-	-	±100	nA	V _{GS} =±20V
Drain-Source Leakage Current	I _{DSS}	-	-	1	μA	V _{DS} =120V, V _{GS} =0, T _J =25°C
		-	-	10		V _{DS} =120V, V _{GS} =0, T _J =55°C
Drain-Source On-Resistance ³	R _{DS(ON)}	-	260	320	mΩ	V _{GS} =10V, I _D =1.5A
			290	380		V _{GS} =4.5V, I _D =1.5A
Forward Transfer conductance	g _{fs}	-	3.3	-	S	V _{DS} =15V, I _D =1A
Total Gate Charge	Q _g	-	8.1	-	nC	V _{DS} =75V
Gate-Source Charge	Q _{gs}	-	1	-		V _{GS} =10V
Gate-Drain ("Miller") Charge	Q _{gd}	-	1.9	-		I _D =1.7A
Turn-on Delay Time	T _{d(on)}	-	5.2	-	nS	V _{DS} =75V
Rise Time	T _r	-	16.2	-		V _{GS} =10V
Turn-off Delay Time	T _{d(off)}	-	20.8	-		R _G =6Ω
Fall Time	T _f	-	15.6	-		I _D =1A
Input Capacitance	C _{iss}	-	298	-	pF	V _{GS} =0V
Output Capacitance	C _{oss}	-	32	-		V _{DS} =30V
Reverse Transfer Capacitance	C _{rss}	-	19	-		f=1MHz
Source-Drain Diode Characteristic						
Diode Forward Voltage ³	V _{SD}	-	-	1.2	V	I _S =1.7A, V _{GS} =0
Continuous Source Current ¹	I _S	-	-	1.7	A	
Pulsed Source Current ²	I _{SM}	-	-	5		
Reverse Recovery Time	T _{RR}	-	45	-	nS	I _F =1.7A, dI/dt=100A/μs,
Reverse Recovery Charge	Q _{RR}	-	16	-	nC	T _J =25°C

Notes:

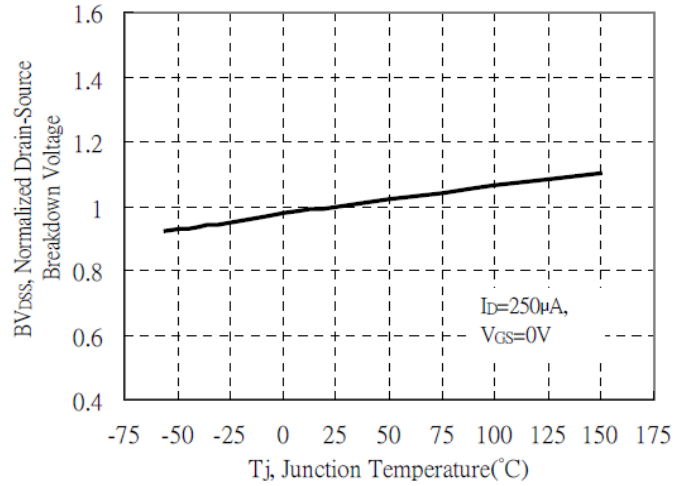
- Surface mounted on 1 inch² FR4 board with 2 oz copper.
- The power dissipation is limited by 150°C junction temperature.
- The data is tested by pulse: Pulse width ≤ 300μs, duty cycle ≤ 2%.

CHARACTERISTIC CURVES

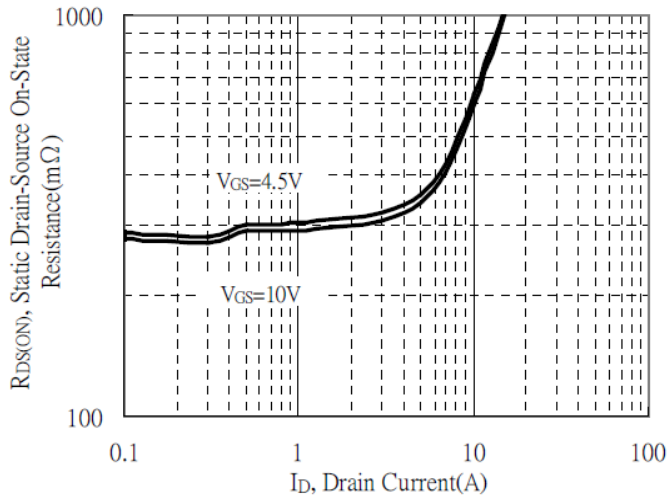
Typical Output Characteristics



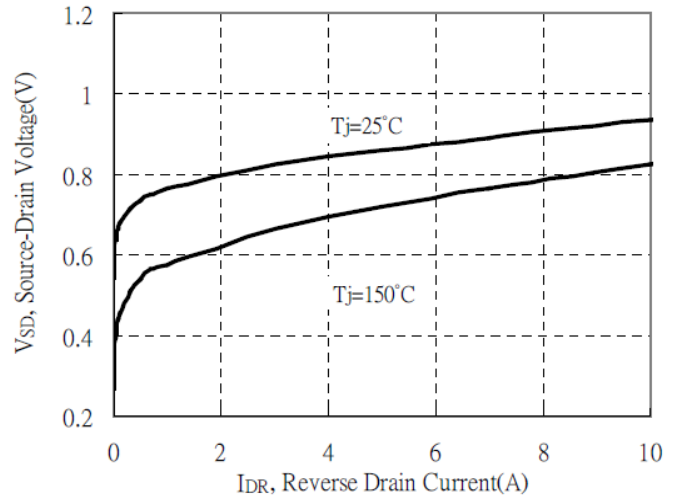
Brekdown Voltage vs Ambient Temperature



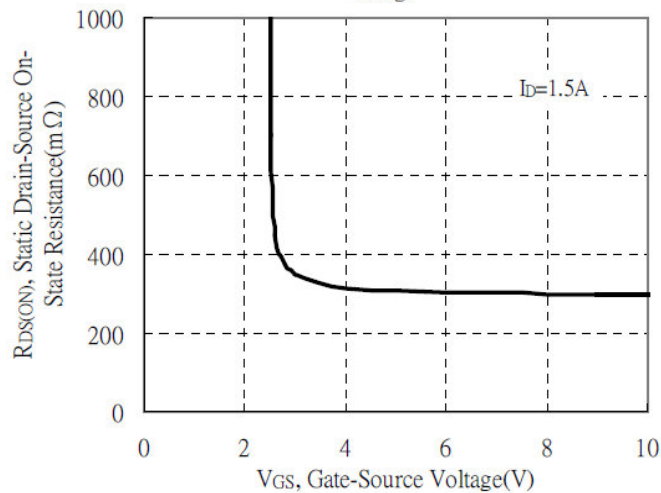
Static Drain-Source On-State resistance vs Drain Current



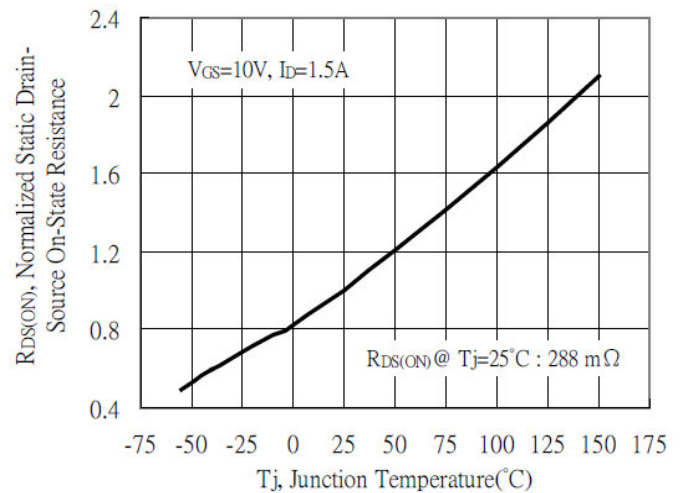
Reverse Drain Current vs Source-Drain Voltage



Static Drain-Source On-State Resistance vs Gate-Source Voltage

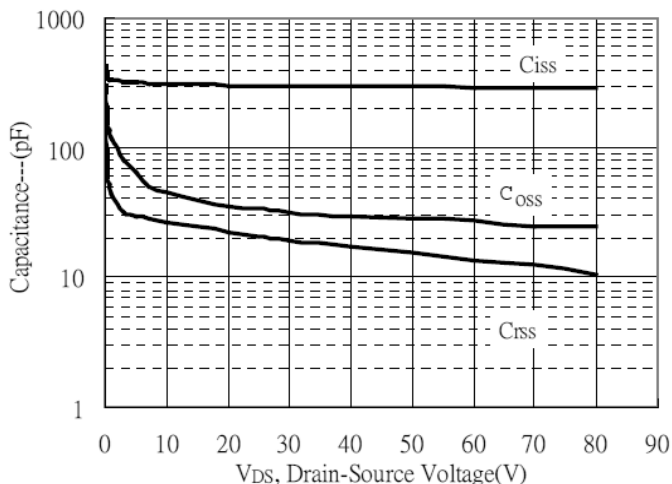


Drain-Source On-State Resistance vs Junction Temperature

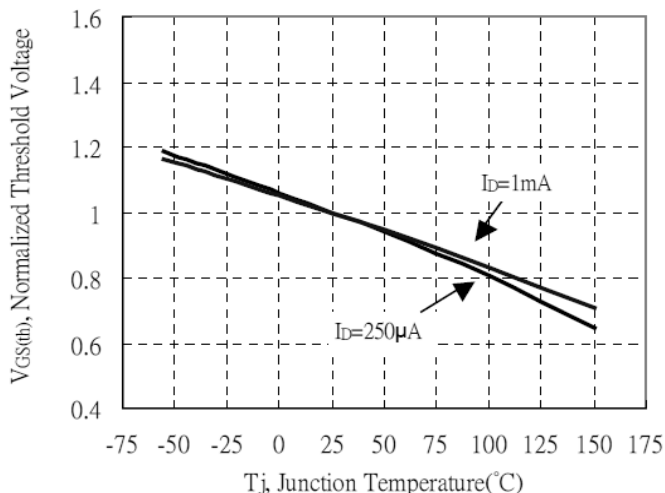


CHARACTERISTIC CURVES

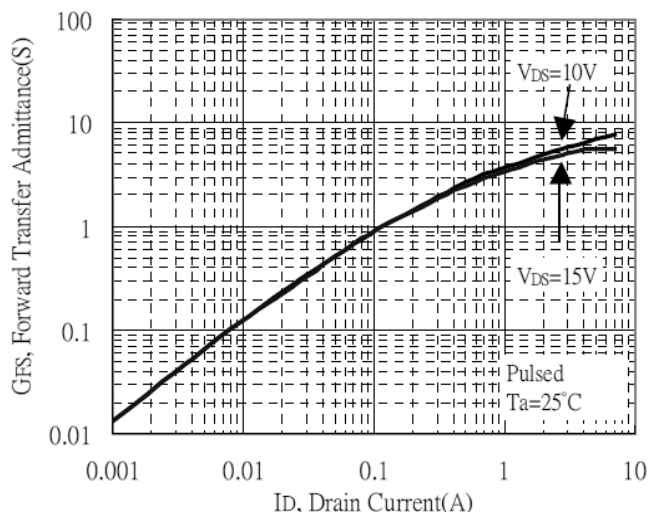
Capacitance vs Drain-to-Source Voltage



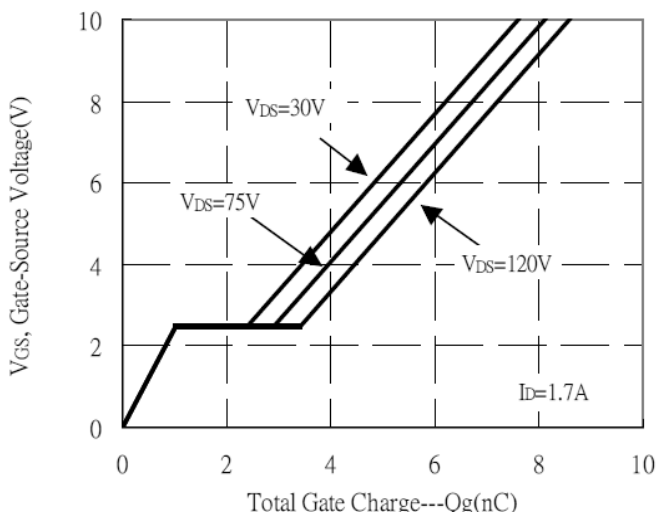
Threshold Voltage vs Junction Temperature



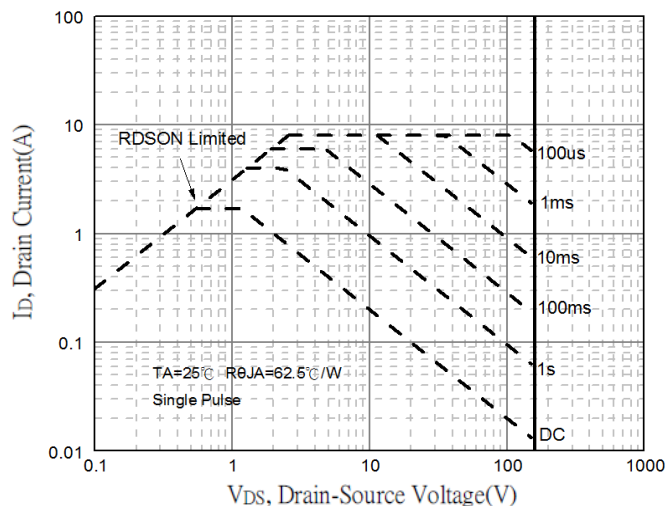
Forward Transfer Admittance vs Drain Current



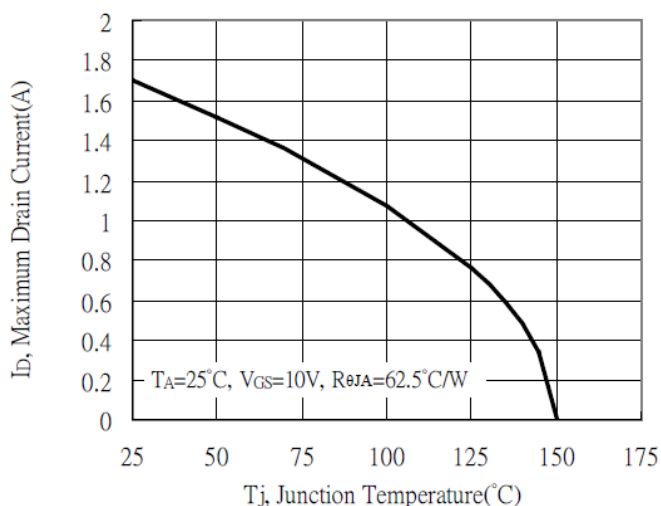
Gate Charge Characteristics



Maximum Safe Operating Area

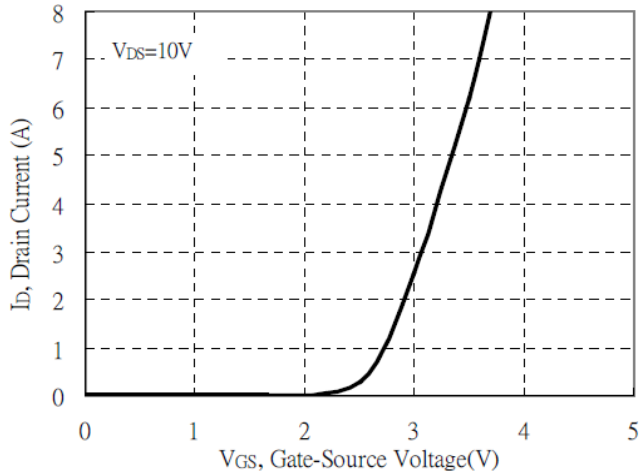


Maximum Drain Current vs Junction Temperature

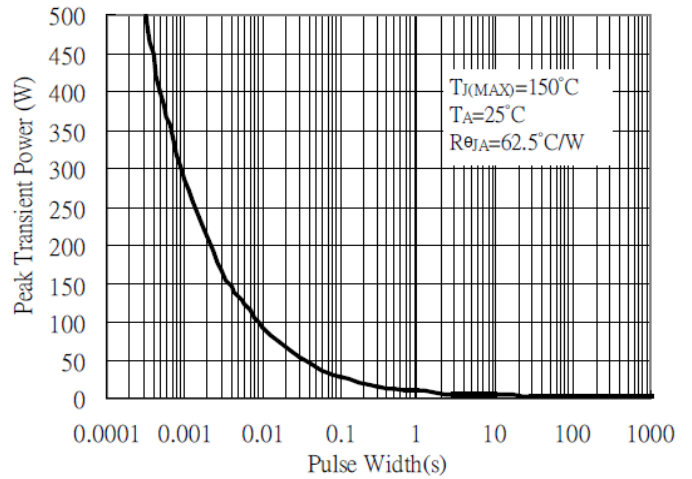


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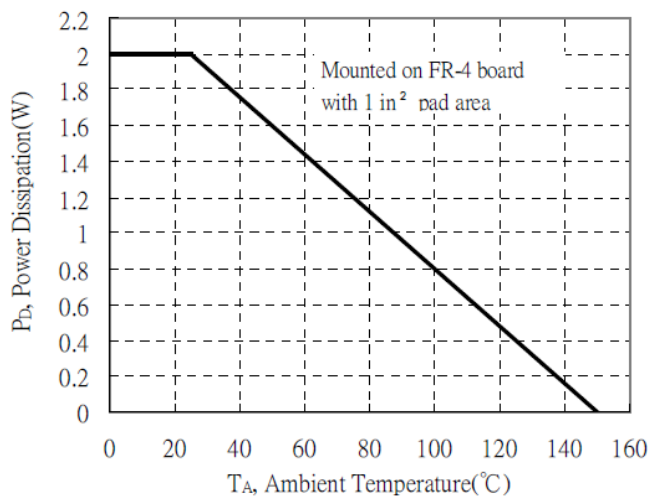
Typical Transfer Characteristics



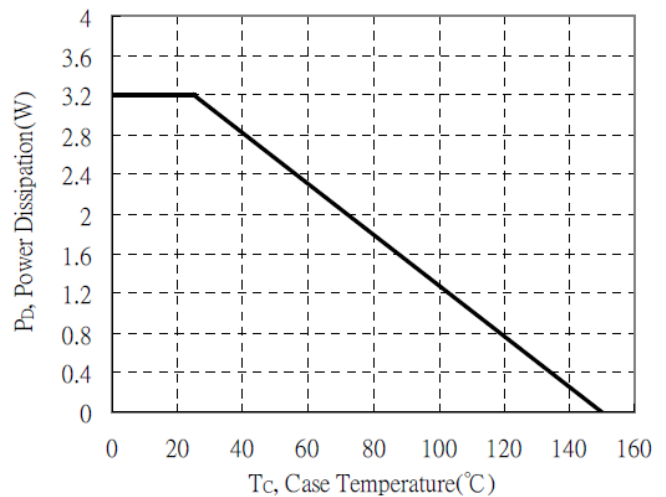
Single Pulse Maximum Power Dissipation



Power Derating Curve



Power Derating Curve



Transient Thermal Response Curves

