

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

DESCRIPTION

SST3415J utilized advanced processing techniques to achieve the lowest possible on-resistance, extremely efficient and cost-effectiveness device. The SOT-26 package is universally used for all commercial-industrial applications.

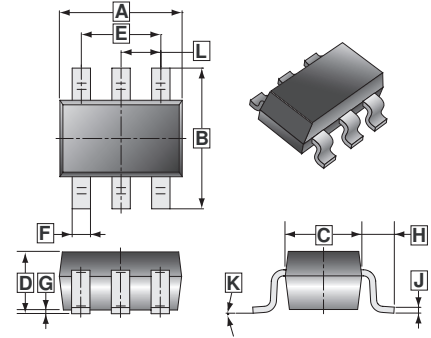
FEATURES

- Simple Drive Requirement
- Smaller Outline Package
- Surface mount package

MARKING

R15

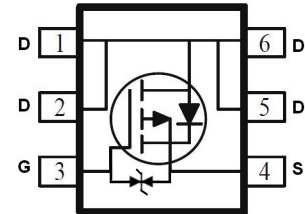
SOT-26



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 ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	± 8	V
Continuous Drain Current ($t \leq 10\text{s}$)	I_D	-4	A
Pulsed Drain Current ¹	I_{DM}	-30	A
Power Dissipation ($t \leq 10\text{s}$)	P_D	0.35	W
Maximum Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Static Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	-20	-	-	V	$V_{GS}=0, I_D = -250\mu\text{A}$
Gate-Threshold Voltage ²	$V_{GS(th)}$	-0.3	-0.56	-1	V	$V_{DS}=V_{GS}, I_D = -250\mu\text{A}$
Gate-Body Leakage Current	I_{GSS}	-	-	± 10	μA	$V_{DS}=0\text{V}, V_{GS}=\pm 8\text{V}$
		-	-	± 1		$V_{DS}=0\text{V}, V_{GS}=\pm 4.5\text{V}$
Drain-Source Leakage Current	I_{DSS}	-	-	-1	μA	$V_{DS} = -16\text{V}, V_{GS}=0$
Drain-Source On-Resistance ²	$R_{DS(ON)}$	-	-	50	m Ω	$V_{GS} = -4.5\text{V}, I_D = -4\text{A}$
		-	-	60		$V_{GS} = -2.5\text{V}, I_D = -4\text{A}$
		-	-	73		$V_{GS} = -1.8\text{V}, I_D = -2\text{A}$
Forward Transconductance ²	g_{fs}	8	-	-	S	$V_{DS} = -5\text{V}, I_D = -4\text{A}$
Dynamic Characteristics						
Input Capacitance	C_{iss}	-	1450	-	pF	$V_{GS}=0$ $V_{DS} = -10\text{V},$ $f=1.0\text{MHz}$
Output Capacitance	C_{oss}	-	205	-		
Reverse Transfer Capacitance	C_{rss}	-	160	-		
Switching Characteristics						
Turn-on Delay Time	$T_{d(on)}$	-	9.5	-	nS	$V_{GS} = -4.5\text{V},$ $V_{DS} = -10\text{V},$ $R_{GEN}=3\Omega,$ $R_L=2.5\Omega$
Rise Time	T_r	-	17	-		
Turn-off Delay Time	$T_{d(off)}$	-	94	-		
Fall Time	T_f	-	35	-		
Total Gate Charge	Q_g	-	17.2	-	nC	$V_{DS} = -10\text{V},$ $V_{GS} = -4.5\text{V},$ $I_D = -4\text{A}$
Gate-Source Charge	Q_{gs}	-	1.3	-		
Gate-Drain ("Miller") Charge	Q_{gd}	-	4.5	-		
Drain-Source Diode Characteristics						
Drain-source diode forward voltage ²	V_{SD}	-	-	-1	V	$I_S = -1\text{A}, V_{GS} = 0$
Maximum continuous drain-source diode forward current	I_S	-	-	-4	A	

Notes:

1. Repetitive rating, pulse width limited by junction temperature.
2. Pulse Test : Pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.

CHARACTERISTIC CURVES

