/ Descriptions

SOT23-3 P MOS

P- CHANNEL MOSFET in a SOT23-3 Plastic Package.

/ Features

V_{DS} (V) = -20V I_D = -7A

$R_{DS(ON)}$@-4.5V(Typ.)=18mΩ

$R_{DS(ON)}$@-2.5V(Typ.)=21mΩ

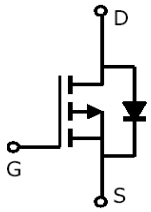
$R_{DS(ON)}$@-1.8V(Typ.)=27mΩ

HF Product.

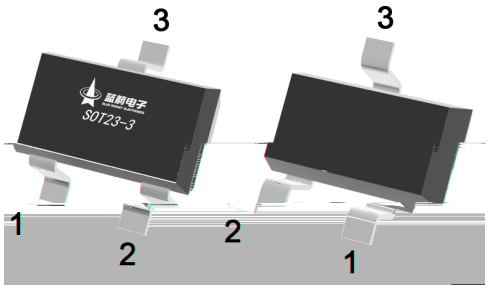
/ Applications

Power Management in Notebook computer, Portable Equipment and Battery powered systems.

/ Equivalent Circuit



/ Pinning



PIN1 G PIN 2 S PIN 3 D

/ Marking

Marking	C4H

/ Absolute Maximum Ratings(Ta=25)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	-20	V
Gate-Source Voltage		V_{GSS}	±12	V
Continuous Drain Current		I_D	-7.0	A
Pulsed Drain Current		I_{DM}	-30	A
Power Dissipation for Single Operation		P_D	1.25	W
Maximum Junction Temperature		T_j	150	
Storage Temperature Range		T_{stg}	-55 150	
Thermal Resistance-Junction to Ambient	t 10s	$R_{\theta JA}$	100	/W
	Steady State		130	/W
Thermal Resistance-Junction to Lead	Steady State	$R_{\theta JL}$	80	/W

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=-250μA	V_{GS}=0V	-20	-23		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-20V	V_{GS}=0V			-1.0	μA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V	V_{GS}=±12V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=VGS	I_D=-250μA	-0.5	-0.7	-1.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-4.5V	I_D=-7A		18	22	mΩ
		V_{GS}=-2.5V	I_D=-4A		21	30	
		V_{GS}=-1.8V	I_D=-3A		27	100	
Diode Forward Voltage	V_{SD}	I_S=-1A	V_{GS}=0V			-1.2	V
Gate resistance	Rg	V_{GS}=0V, f=1MHz	V_{DS}=0V,		11		Ω
Input Capacitance	C_{iss}	V_{GS}=0V f=1MHz	V_{DS}=-5V		1700		pF
Output Capacitance	C_{oss}				600		
Reverse Transfer Capacitance	C_{rss}				450		

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	V_{GS}=-4.5V, V_{DS}=-10V, I_D=-7A		13		nC
Gate Source Charge	Q_{gs}			2.5		
Gate Drain Charge	Q_{gd}			4.2		
Turn–On Delay Time	$t_{d(on)}$	V_{GS}=-4.5V R_L=1.25Ω V_{DS}=-10V R_{GEN}=3Ω		7.5		ns
Turn–On Rise Time	t_r			29.2		
Turn–Off Delay Time	$t_{d(off)}$			103		
Turn–Off Fall Time	t_f			50		

/ Electrical Characteristic Curve

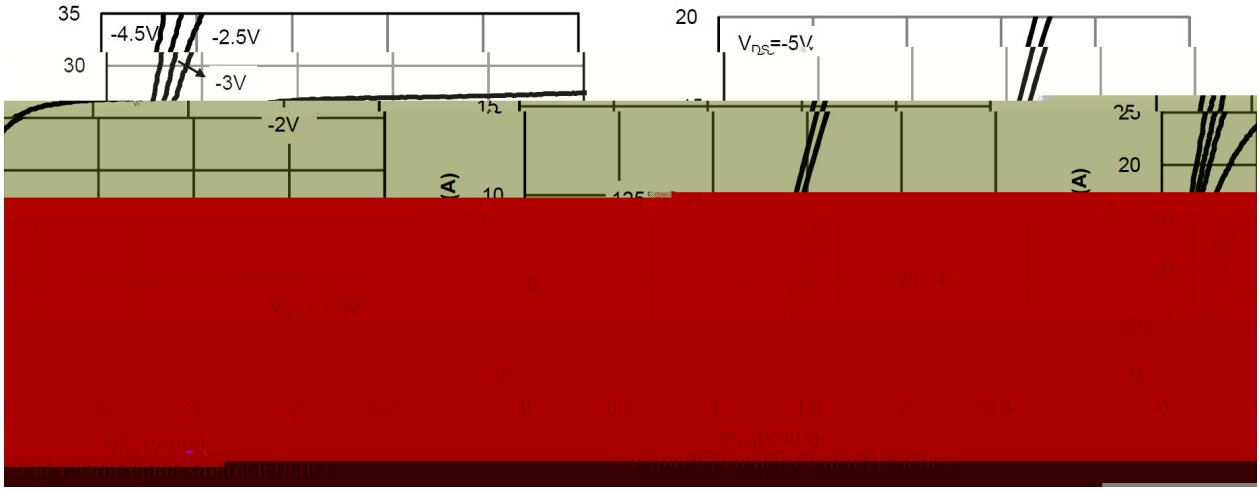
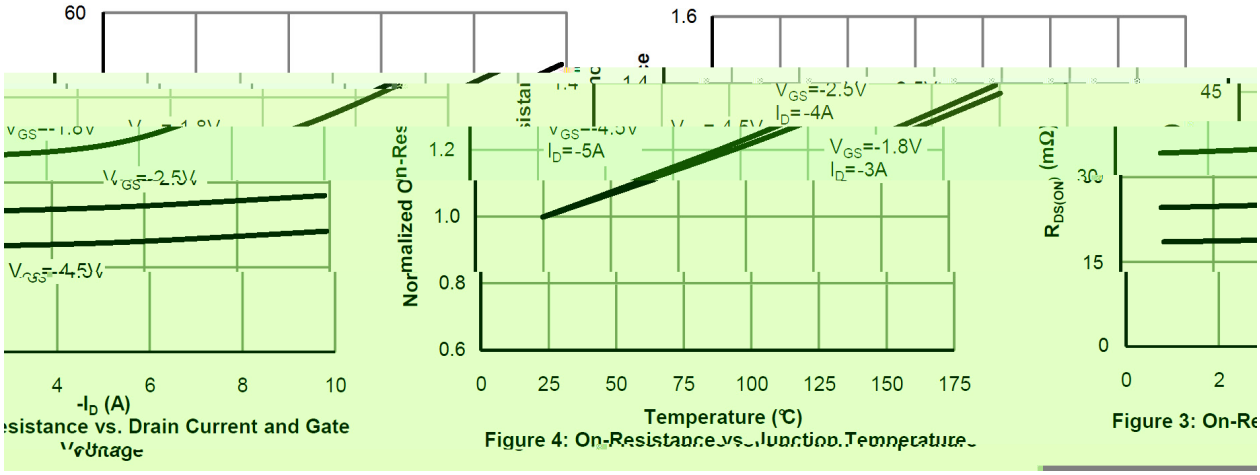


Fig 1.Configuration Characteristics

Figure 2: Transfer Characteristics



sistance vs. Drain Current and Gate Voltage

Figure 4: On-Resistance vs. Junction Temperature

Figure 3: On-Re

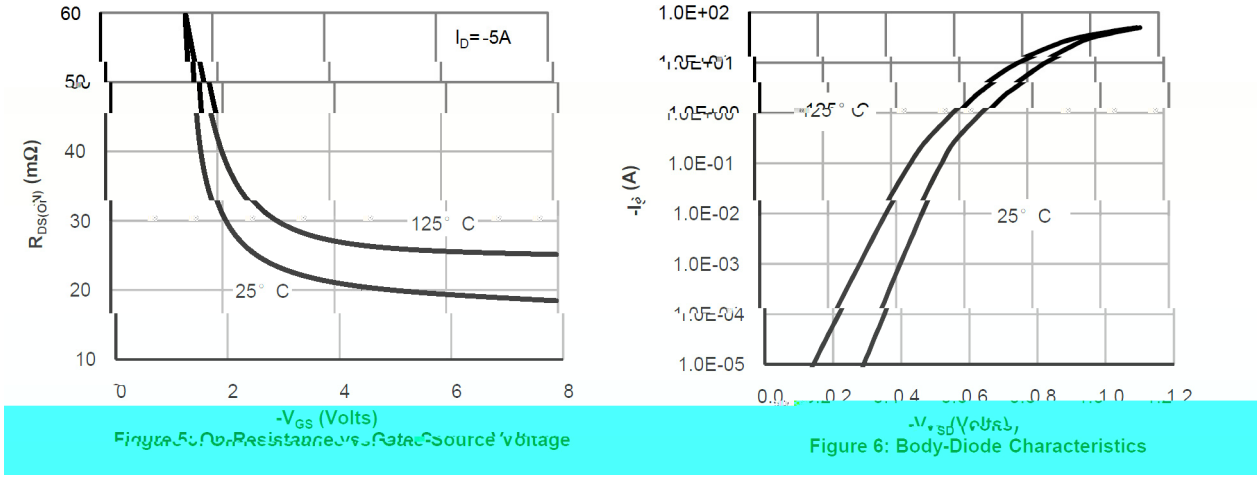
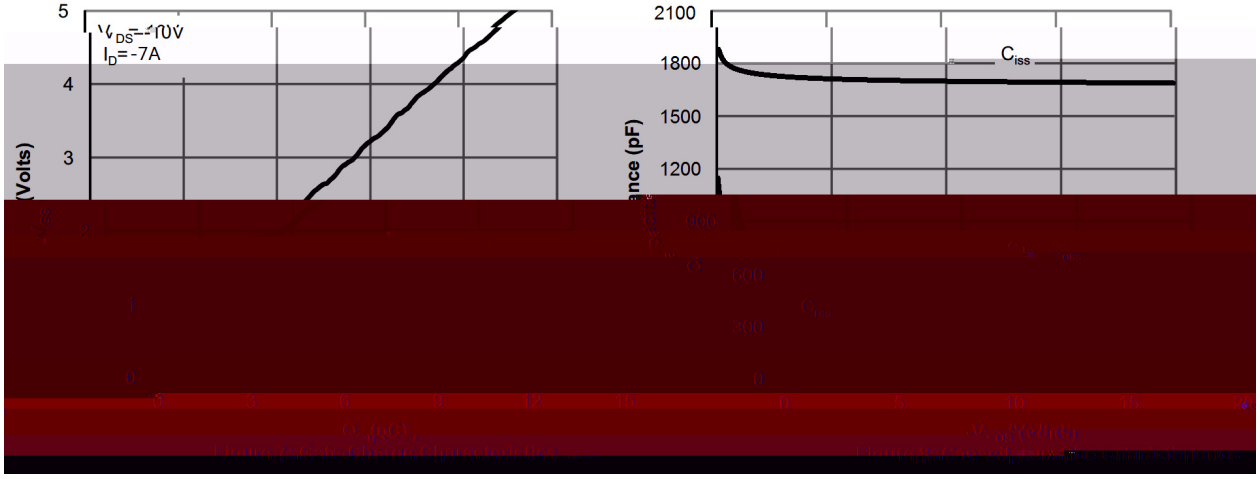
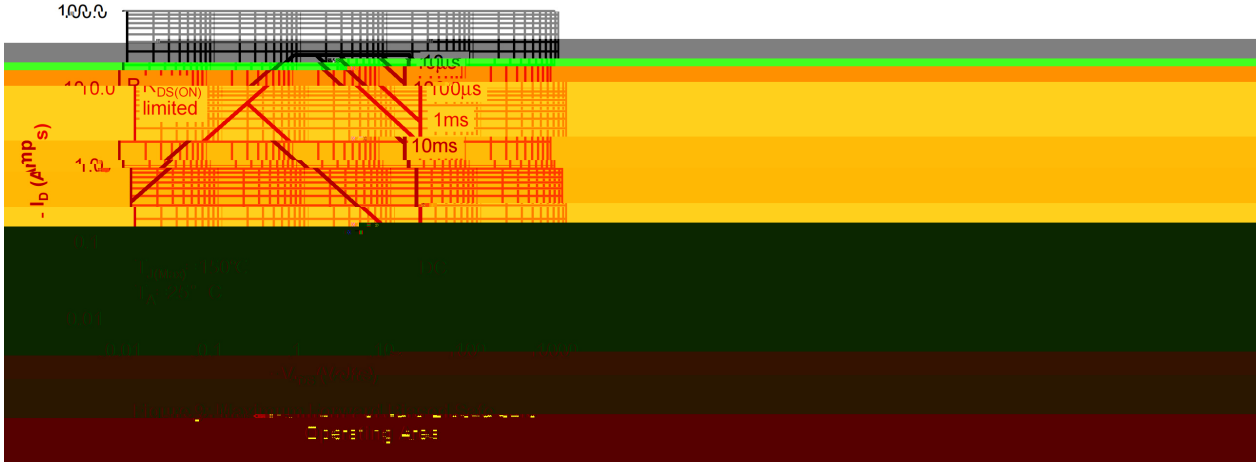


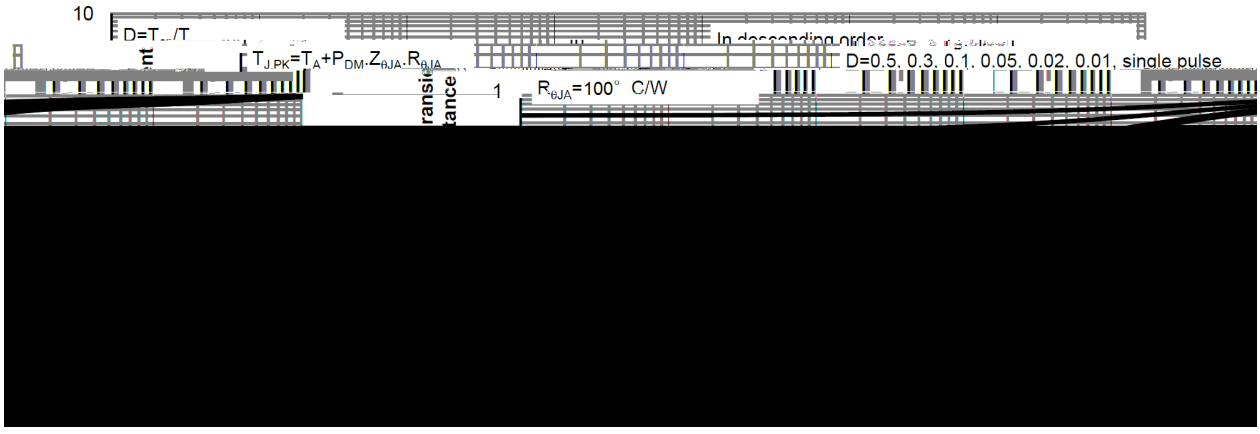
Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

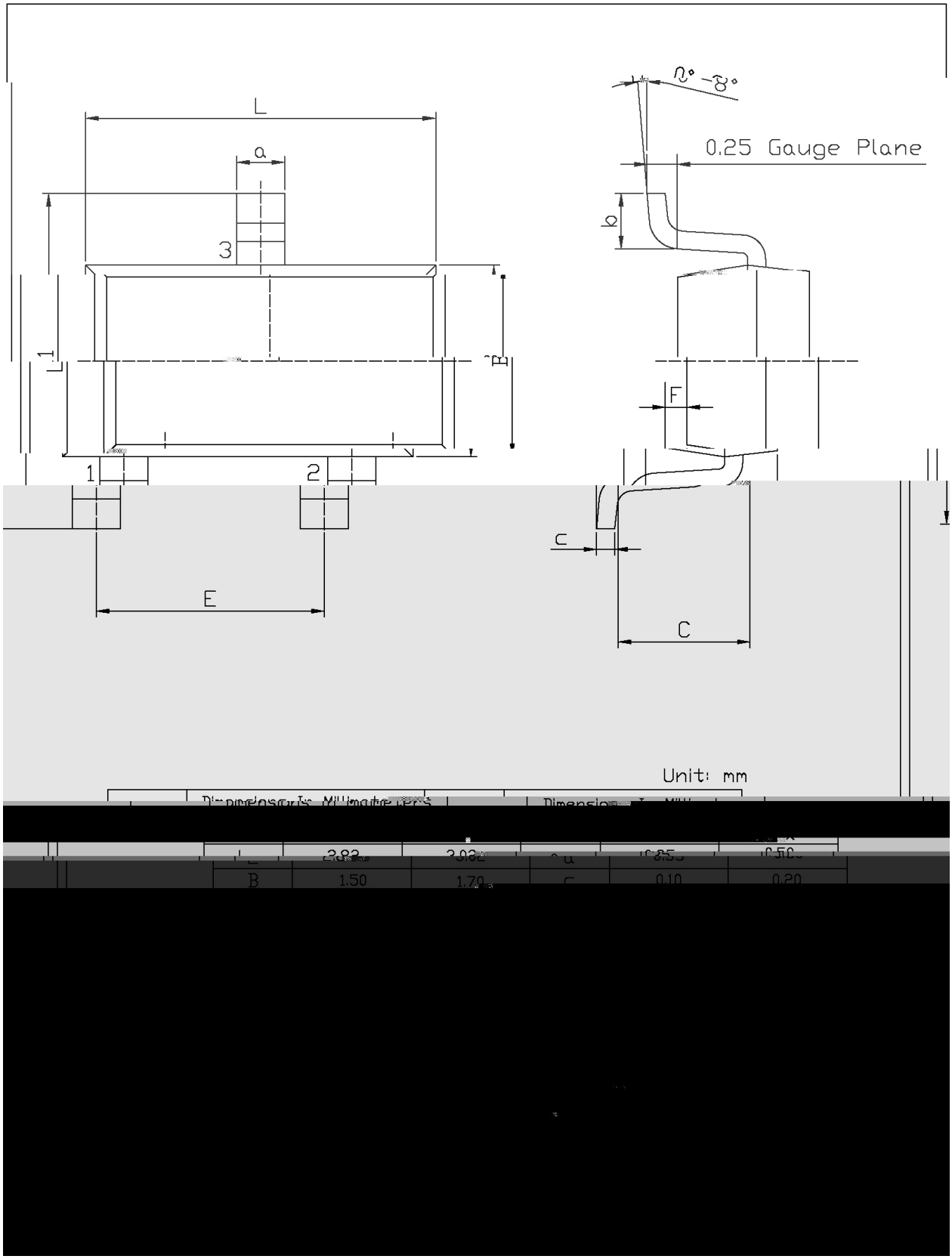
/ Electrical Characteristic Curve



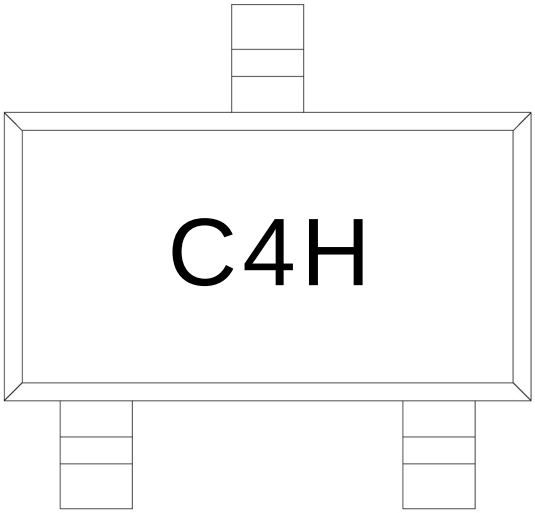




/ Package Dimensions



/ Marking Instructions



C4

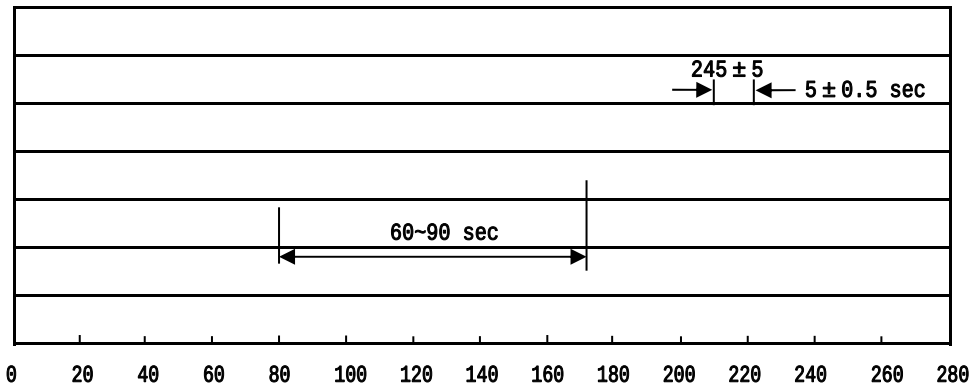
H

Note:

C4: Product Type Code

H: Company Code

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

1	150 180 60 90sec;	1.Preheating:150~180 , Time:60~90sec.
2	245±5 5±0.5sec;	2.Peak Temp.:245±5 , Duration:5±0.5sec.
3	2 10 /sec.	3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension		(unit mm³)
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
SOT23-3	3,000	10	30,000	4	120,000	7 ×8	210×205×205	445×435×230

/ Notices