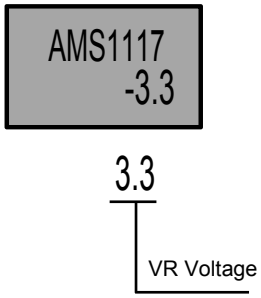
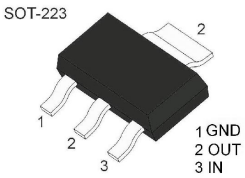
Features

- Surface Mount Package SOT-223
- Output Current up to 1 A
- Low Dropout Voltage (1.2V at 1A Output Current)
- Three Terminal Fixed 5.0V
- Line Regulaion typically at 0.1% max
- Load Regulaion typically at 0.2% max
- Internal Current and Terminal Protection
- Maximum Input Voltage - 15V



Applications

- Active SCSI Terminators
- Portable/Plan Top/Notebook Computers
- High Efficiency Linear Regulators
- SMPS Post Regulators
- Mother B/D Clock Supplies
- Disk Drives
- Battery Chargers



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings

Parameter	Symbol	Maximum	Unit
Power Dissipation	P_D	Internally Limited	W
Maximum Input Voltage	V_{IN}	15	V
Output current	I_{OUT}	1.0	A
Operating Junction Temperature Range	T_J	-40～+125	℃
Storage Temperature	T_{STG}	-65～+150	℃
Lead Temperature (Soldering, 10 sec)	T_{LEAD}	260	℃
Minimum ESD Rating (HBM)	V_{ESD}	2000	V

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction-to-ambient	$R_{\theta JA}$	165	℃/W
Junction-to-case	$R_{\theta JC}$	15	℃/W

Electrical Characteristics

(Refer to the test circuits, T_J=25℃ C_O=10μF unless otherwise specified).

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Output Voltage	V_{OUT}	I_O=10mA , V_{IN} =4.8V I_O=10mA ~1A, V_{IN} = 4.8V~10V	3.234 3.201	3.3 3.3	3.366 3.399	V V
Line Regulation	ΔV_{OUT}	I_O = 0mA, V_{IN} =4.8V~10V			10	mV
Load Regulation	ΔV_{OUT}	V_{IN} =5.3V, I_O=10mA ~1A			1	%
Operating Input Voltage	V_{IN}	I_O = 100mA			15	V
Quiescent Current	I_Q	V_{IN} ≤ 15V			10	mA
Current Limit	I_O	V_{IN} = 5.3V	1000			mA
Ripple Regulation	RR	I_O = 40mA , f = 120Hz, T_J = 25℃ V_{IN} =6.3V, V_{RIPPLE} = $1V_{PP}$		80		dB
Dropout Voltage	V_D	I_O = 100mA			1.20	V
		I_O = 500mA			1.25	V
		I_O = 1000mA			1.30	V

RATING AND CHARACTERISTIC CURVES

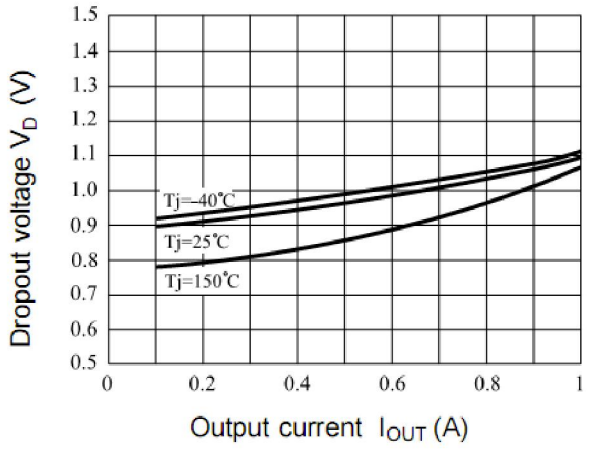


Figure 2. Dropout voltage vs Output current

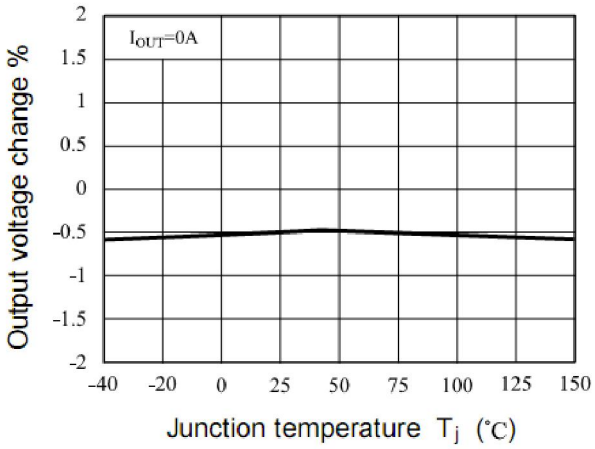


Figure 3. Output voltage change vs Junction temperature

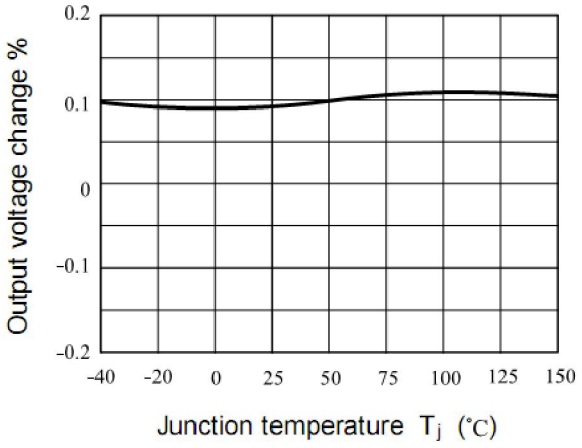


Figure 4. Line regulation

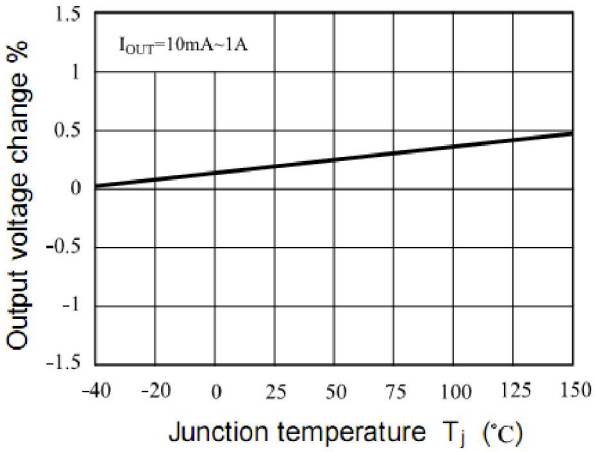


Figure 5. Load regulation

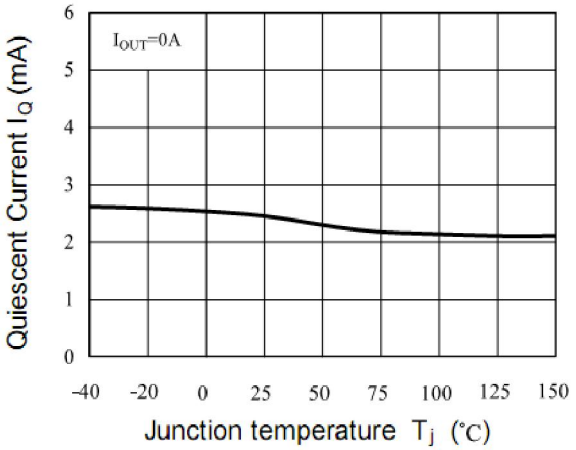


Figure 6. Quiescent current vs Junction temperature

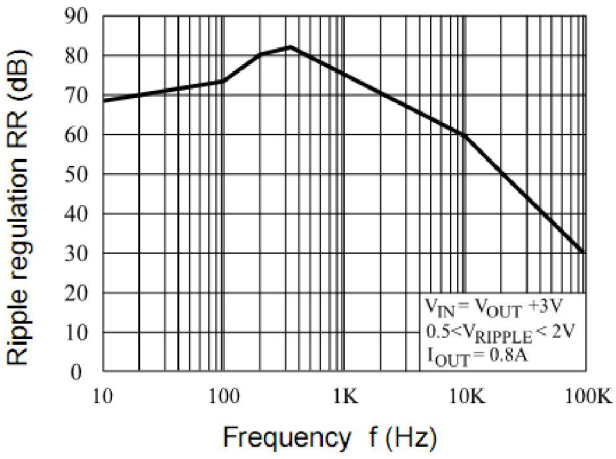
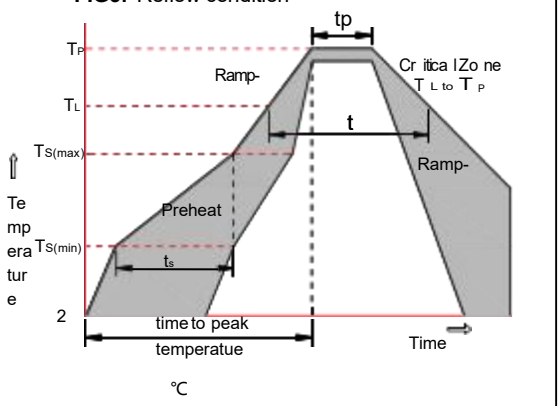


Figure 7. Ripple regulation vs frequency

Soldering parameters

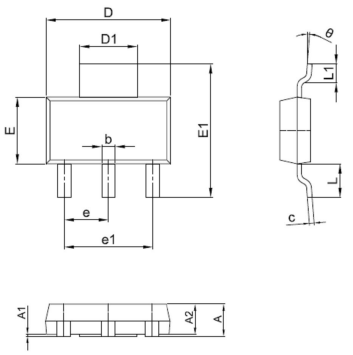
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

FIG5: Reflow condition

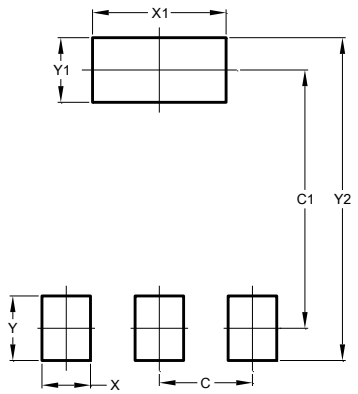


Package Dimensions & Suggested Pad Layout

SOT-223



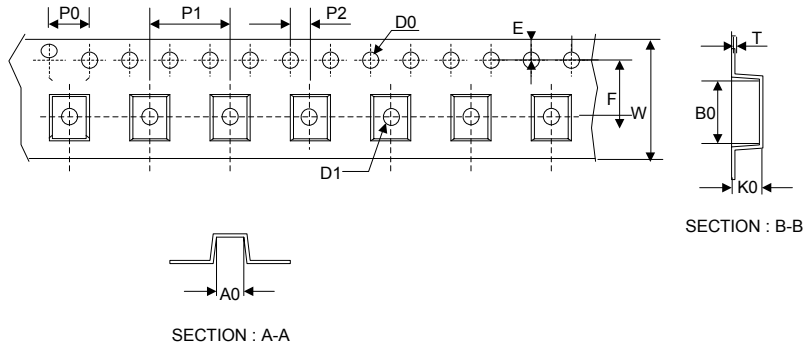
Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.00	0.10	0.000	0.004
A2	1.50	1.70	0.059	0.067
b	0.65	0.75	0.026	0.030
c	0.20	0.30	0.008	0.012
D	6.40	6.60	0.252	0.260
D1	2.90	3.10	0.114	0.122
E	3.30	3.70	0.130	0.146
E1	6.85	7.15	0.270	0.281
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	1.65	1.85	0.065	0.073
L1	0.90	1.15	0.035	0.045



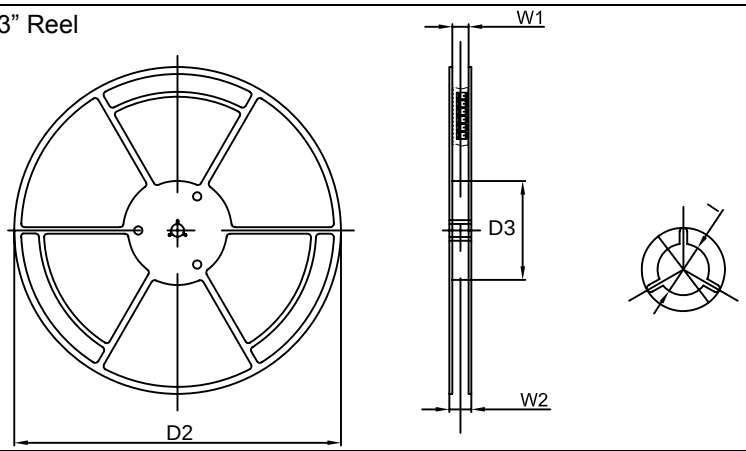
Dimensions	Value (in mm)
C	2.30
C1	6.00
X	1.20
X1	3.60
Y	1.70
Y1	1.70
Y2	7.70

Tape & rell specification

Tape



13” Reel



Symbol	Dimension (mm)
P0	4.00±0.20
P1	8.00±0.20
P2	2.00±0.20
D0	1.55±0.20
D1	1.55±0.20
E	1.75±0.20
F	5.50±0.20
W	12.00±0.20
A0	7.40±0.20
B0	7.50±0.20
K0	2.10±0.20
T	0.20±0.20
D2	330.0±5.0
D3	100.0±4.0
W1	18.0±5.0
W2	22.0±5.0
I	13.0±2.0

Quantity: 2500PCS