

FEATURE

- Low gate charge
- Low C_{iss}
- Fast switching
- 100% avalanche tested
- Improved dv/dt capability

Maximum output current

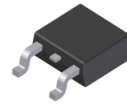
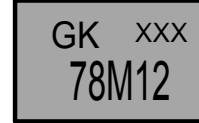
$$I_{OM}: 0.5 \text{ A}$$

Output voltage

$$V_O: 12\text{V}$$

Continuous total dissipation

$$P_D: 1.25 \text{ W } (T_a = 25^\circ\text{C})$$



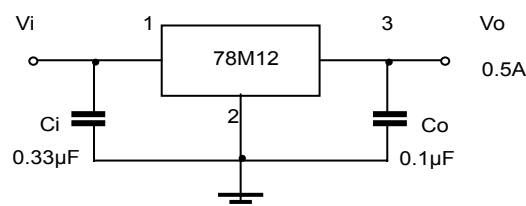
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	25	V
Operating Junction Temperature Range	T_{OPR}	0-+125	°C
Storage Temperature Range	T_{STG}	-65-+150	°C

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE

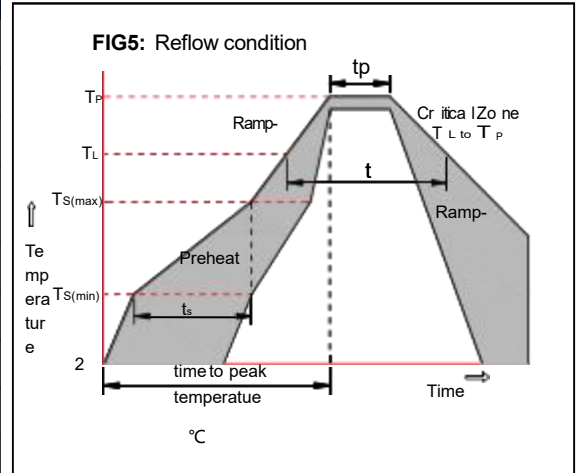
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output Voltage	V_o	25°C	11.5	12	12.5	V	
		$14.5 \leq V_i \leq 27\text{V}, I_o = 5\text{mA} - 350\text{mA}$ $P_o \leq 1.25\text{W}$	0-125°C	11.4	12	12.6	V
Load Regulation	ΔV_o	$I_o = 5\text{mA} - 500\text{mA}$	25°C		25	240	mV
		$I_o = 5\text{mA} - 200\text{mA}$	25°C		10	120	mV
Line Regulation	ΔV_o	$14.5\text{V} \leq V_i \leq 30\text{V}, I_o = 200\text{mA}$	25°C		10	100	mV
		$16\text{V} \leq V_i \leq 30\text{V}, I_o = 200\text{mA}$	25°C		3	50	mV
Quiescent Current	I_q		25°C		4.6	6	mA
Quiescent Current Change	ΔI_q	$14.5\text{V} \leq V_i \leq 30\text{V}, I_o = 200\text{mA}$	0-125°C			0.8	mA
	ΔI_q	$5\text{mA} \leq I_o \leq 350\text{mA}$	0-125°C			0.5	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$	25°C		75	μV	
Ripple Rejection	RR	$15 \leq V_i \leq 25\text{V}, f = 120\text{Hz}, I_o = 300\text{mA}$	0-125°C	55	80	dB	
Dropout Voltage	V_d	$I_o = 350\text{mA}$	25°C		2	V	
Short Circuit Current	I_{sc}	$V_i = 19\text{V}$	25°C		240	mA	
Peak Current	I_{pk}		25°C		0.7	A	

TYPICAL APPLICATION



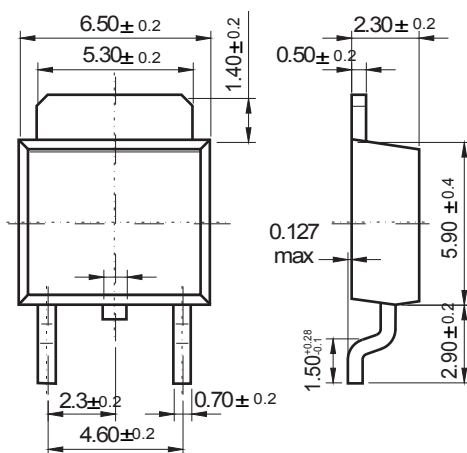
Soldering parameters

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

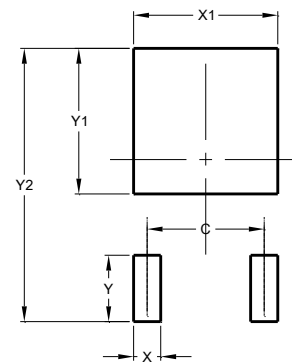


Package Dimensions & Suggested Pad Layout

TO-252



Dimensions in inches and (millimeters)



Dimensions	Value (in mm)
C	4.55
X	1.50
X1	5.80
Y	2.70
Y1	6.00
Y2	10.90

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	8.00±0.20
		P2	2.00±0.20
		D0	1.55±0.15
		D1	1.55±0.20
		E	1.75±0.20
		F	7.50±0.20
		W	16.00±0.20
		A0	7.10±0.20
		B0	10.50±0.20
		K0	2.70±0.20
		T	0.30±0.10
		D2	330.0±5.0
		D3	100.0±4.0
W1	20.0±5.0		
W2	25.0±5.0		
I	13.0±2.0		
Quantity: 2500PCS			

13" Reel

