

/ Descriptions

TO-252 Voltage Regulator in a TO-252 Plastic Package.

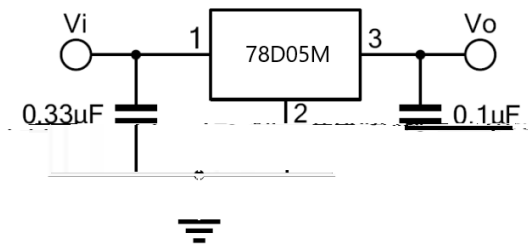
/ Features

0.5A,
3-Terminal regulators ,output current up to 0.5A, internal thermal overload protection and short-circuit limiting, HF Product.

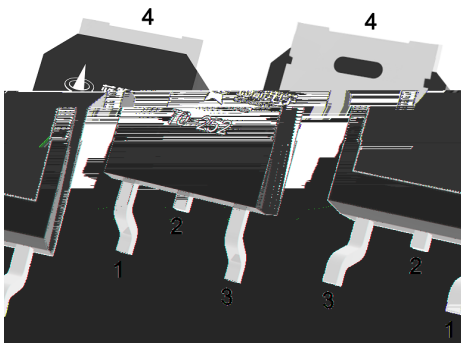
/ Applications

Voltage Regulator.

/ Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN PIN 2 4 GND PIN 3 OUT

/ Marking

See Marking Instructions.

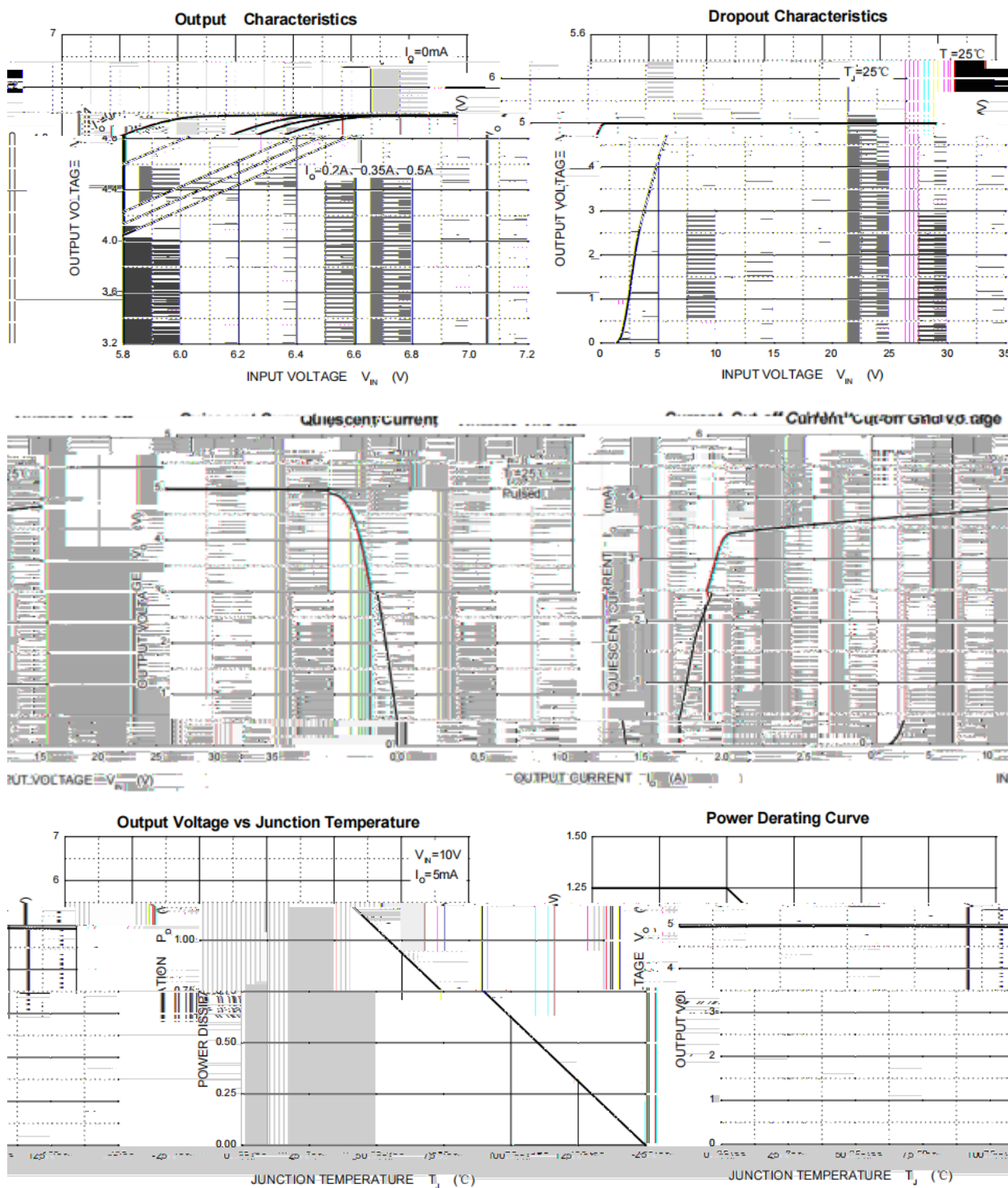
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Input voltage	V_I	35	V
Power Dissipation	P_D	Internally Limited	W
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	105	/W
Thermal Resistance Junction-Case	$R_{\theta JC}$	10	/W
Operating Temperature Range	T_{OPR}	-40 125	°C
Storage temperature range	T_{stg}	-65 150	°C

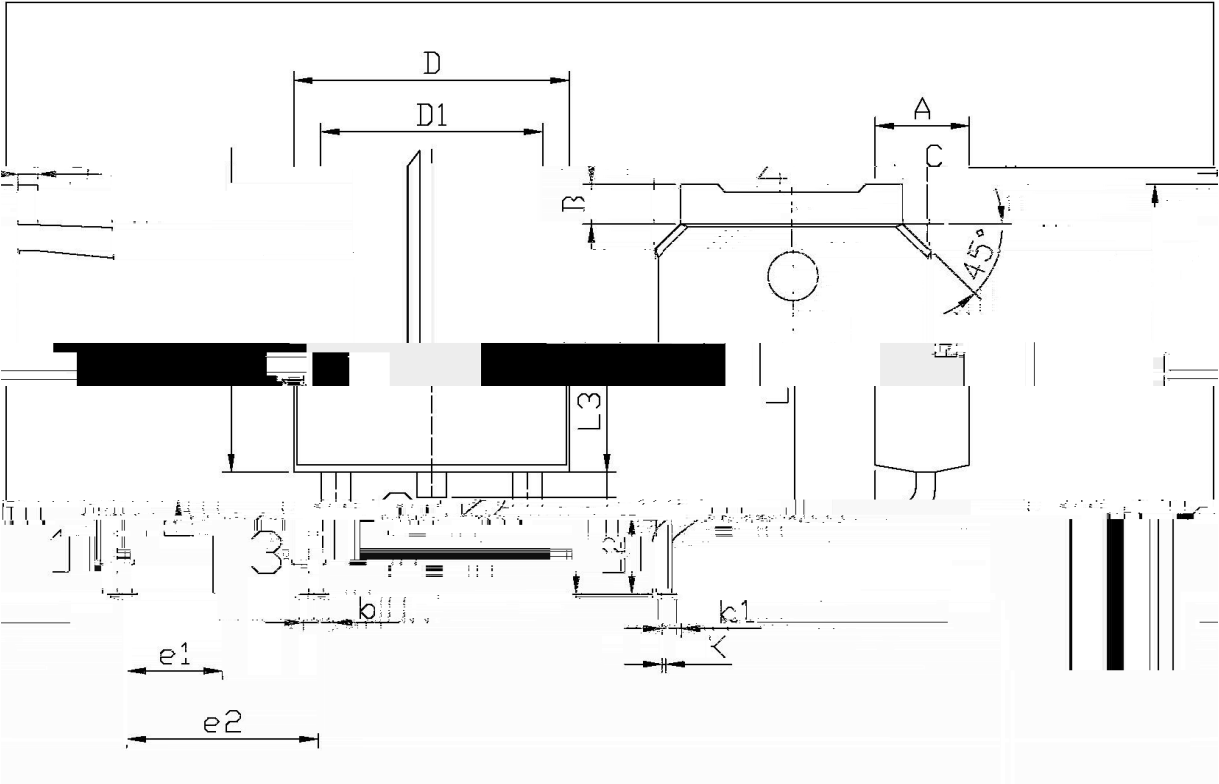
/ Electrical Characteristics($V_i=10V, I_o=350mA, T_j=0 \sim 125$,unless otherwise specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_j=25^{\circ}C$	4.8	5.0	5.2	V
		$V_i=7V \sim 20V$ $I_o=5mA \sim 350mA$	4.75	5.0	5.25	V
Load Regulation	V_{Load}	$T_j=25^{\circ}C$ $I_o=5mA \sim 500mA$			100	mV
		$T_j=25$ $I_o=5mA \sim 200mA$			50	mV
Line Regulation	V_{Line}	$T_j=25^{\circ}C$ $V_i=7V \sim 25V$			100	mV
		$T_j=25^{\circ}C$ $V_i=8V \sim 25V$			50	mV
Quiescent Current	I_q	$T_j=25$			6.0	mA
Quiescent Current Change	I_q	$V_i=8V \sim 25V$			0.8	mA
		$I_o=5mA \sim 350mA$			0.5	mA
Output Voltage Drift	V_o/ T	$I_o=5mA$ $T_j=0 \sim 125$		0.5		mV/°C
Output Noise Voltage	eN	B=10Hz~100KHz $T_j=25$		40		μV/ V_o
Supply Voltage Rejection	SVR	$V_i=8V \sim 18V$ $f=120Hz$	62			dB
Dropout Voltage	V_d	$T_j=25$		2.0		V
Short Circuit Current	Isc	$T_j=25$		700		mA

/ Electrical Characteristic Curve



/ Package Dimensions



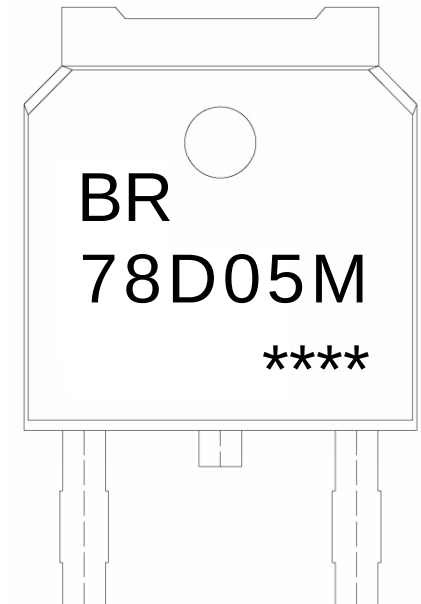
单位：mm

Symbol		Dimensions In Millimeters		Symbol		Dimensions In Millimeters	
		Min	Max			Min	Max
A	5.95	6.25		A	2.20	2.40	E
B	2.24	2.34		B	0.95	1.25	e1
C	4.43	4.73		C	0.70	0.90	e2
D	9.85	10.35		b1	0.45	0.55	L1
D1	5.10	5.50		L2	1.70	2.00	
L3	0.60	0.90		D	6.45	6.75	
K	0.60	0.10		D1	5.10	5.50	

-252

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/ **Marking Instructions**



BR

78D05M

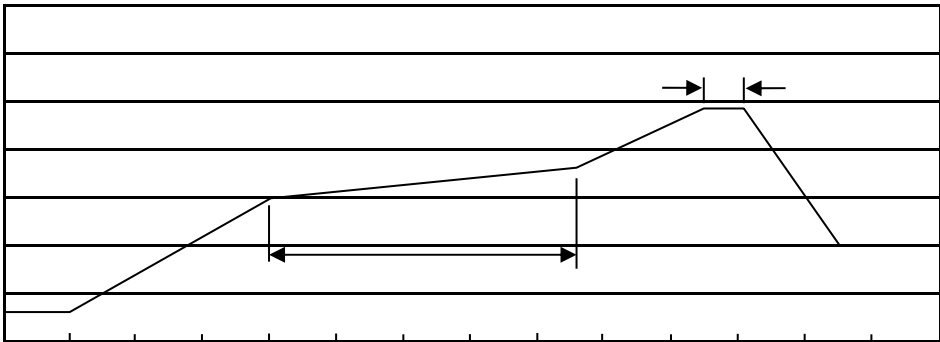
Note:

BR: Company Code

78D05M: Product Type

****: Lot No. Code, code change with Lot No

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



- Note:
- 1 150 180 60 90sec;

2 245±5 5±0.5sec;

3 2 10 /sec.
- 1.Preheating:150~180 , Time:60~90sec.

2.Peak Temp.:245±5 , Duration:5±0.5sec.

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 mm ³)		
TO-252	2,500	2	5,000	6	30,000	13 ×16	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices

PCB