

/ Descriptions

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

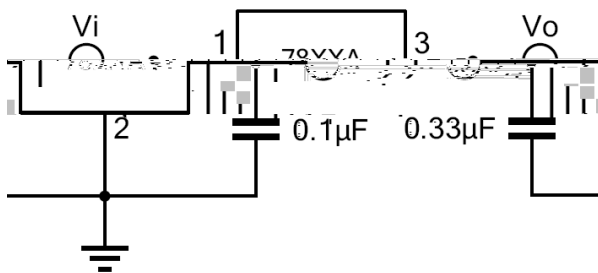
/ Features

1.0A,
3-Terminal regulators ,output current up to 1.0A, internal thermal overload protection and short-circuit limiting, HF Product.

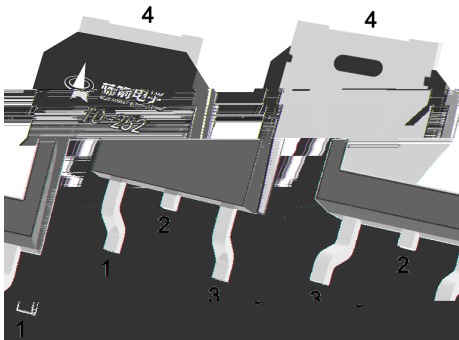
/ Applications

Voltage Regulator.

/ Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN PIN 2 4 GND PIN 3 OUT

/ Marking

See Marking Instructions.

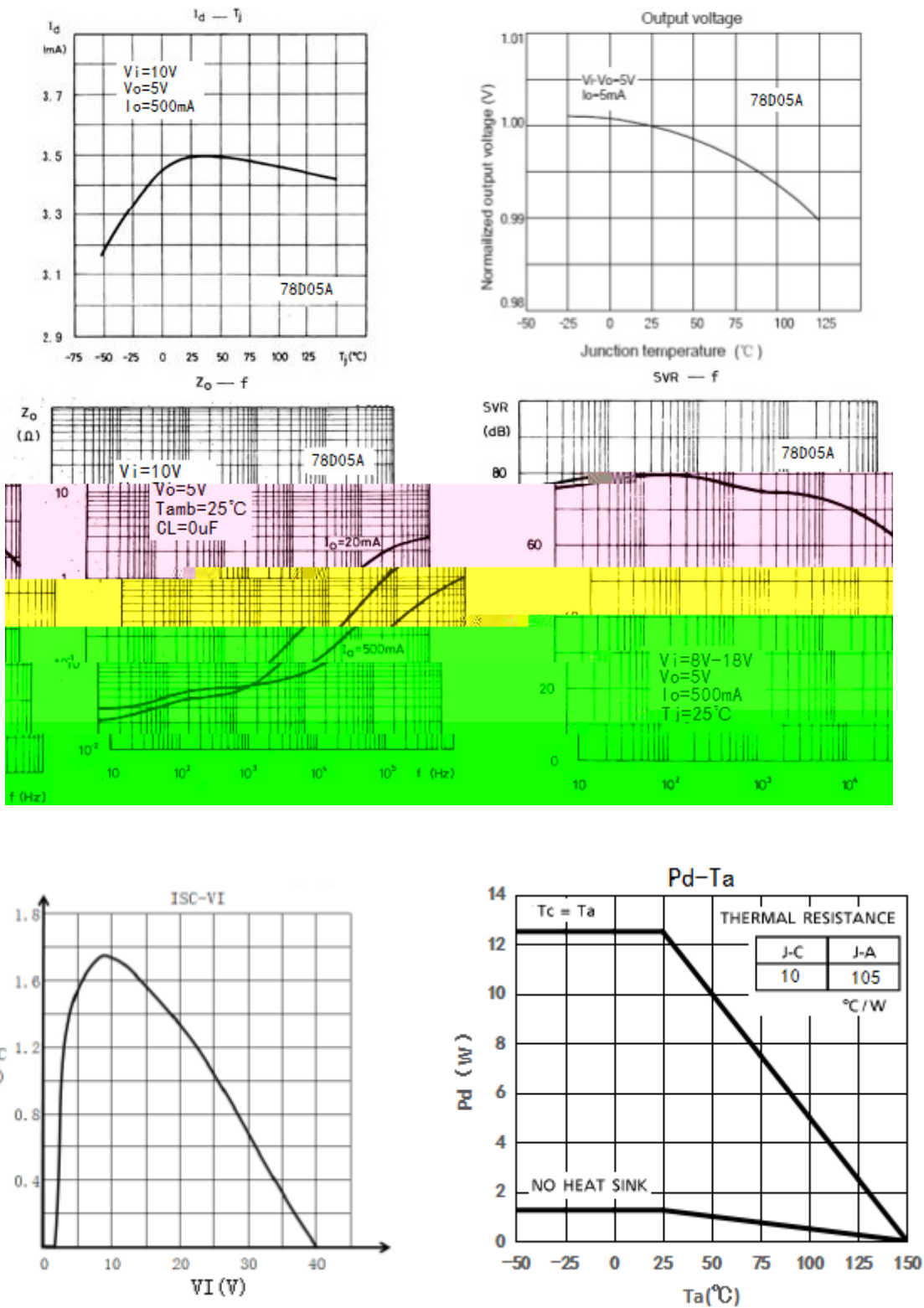
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Input voltage	V_I	7~35	V
Power Dissipation	P_D	Internally Limited	W
Thermal Resistance Junction-Ambient	R_{JA}	105	/W
Thermal Resistance Junction-Case	R_{JC}	10	/W
Operating Temperature Range	T_{OPR}	-40~125	
Storage temperature range	T_{stg}	-65~150	

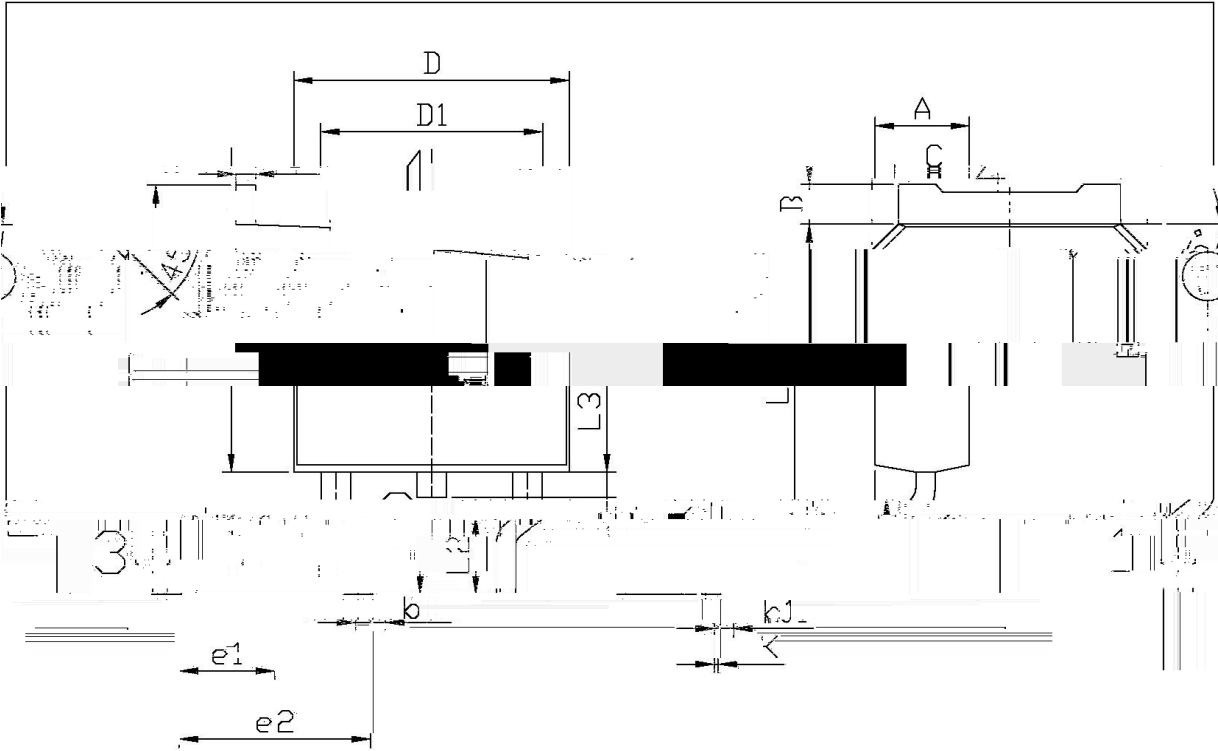
/ Electrical Characteristics($V_i=10V, I_o=500mA, T_j=-30 \sim 125$,unless otherwise specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_j=25$	4.8	5.0	5.2	V
		$V_i=7V \sim 20V$ $I_o=5mA \sim 1.0A$ $P_D \ 15W$	4.75	5.0	5.25	V
Load Regulation	ΔV_{Load}	$T_j=25$ $I_o=5mA \sim 1.0A$			100	mV
		$T_j=25^\circ C$ $I_o=250mA \sim 750mA$			50	mV
Line Regulation	ΔV_{Line}	$T_j=25$ $V_i=7V \sim 25V$			100	mV
		$T_j=25$ $V_i=8V \sim 12V$			50	mV
Quiescent Current	I_q	$T_j=25^\circ C$			8.0	mA
Quiescent Current Change	ΔI_q	$V_i=7V \sim 25V$			0.8	mA
		$I_o=5mA \sim 1.0A$			0.5	mA
Output Voltage Drift	$\Delta V_o / \Delta T$	$I_o=5mA$ $T_j=0 \sim 125^\circ C$		-0.4		mV/
Output Noise Voltage	eN	B=10Hz~100KHz $T_j=25^\circ C$		42		V/Vo
Supply Voltage Rejection	SVR	$V_i=8V \sim 18V$ $f=120Hz$	62			dB
Dropout Voltage	Vd	$I_o=1.0A$ $T_j=25^\circ C$		2.0		V
Output Resistance	Ro	$f=1KHz$		15		m
Short Circuit Current	Isc	$V_i=35V$ $T_j=25^\circ C$		220		mA

/ Electrical Characteristic Curve



/ Package Dimensions

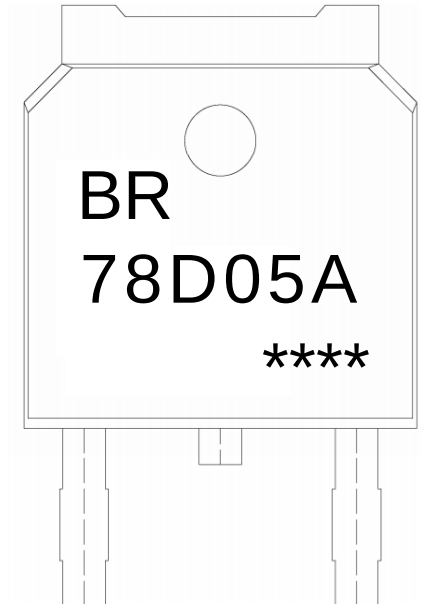


单位：mm

Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
F	5.05	6.25	A	2.20	2.40
L	1.25	2.24	B	0.95	0.95
e1	0.90	1.40	C	0.70	0.70
e2	0.45	1.1	L1	9.85	10.35
L3	0.60	0.90	L2	1.30	2.00
K	0.50	0.80	D	6.45	6.75
K1	0.40	0.70	J1	0.30	0.30
K2	0.40	0.70	J2	0.30	0.30

T0-252

/ Marking Instructions



BR

78D05A

Note:

BR: Company Code

78D05A: Product Type

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

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



Note:

- | | | | | | |
|---|-------|-----|----|-----------|--|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 °C , Time:60~90sec. |
| 2 | 245±5 | | | 5±0.5sec; | 2.Peak Temp.:245±5 °C , Duration:5±0.5sec. |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 °C/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)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
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)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-251/252	75	48	3,600	5	18,000	526×20.5×5.25	555×164×50	575×290×180

/ Notices

PCB