

/ Descriptions

TO-251 Voltage Regulator in a TO-251 Plastic Package.

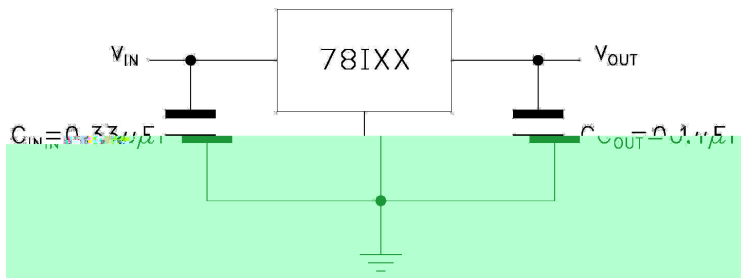
/ Features

1.5A,
3-Terminal regulators ,output current up to 1.5A, internal thermal overload protection and short-circuit limiting.

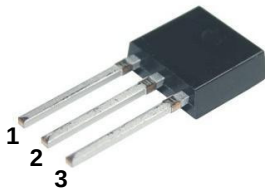
/ Applications

Voltage Regulator.

/ / Equivalent Circuit or Application Circuit



/ Pinning



PIN1 IN PIN 2 GND PIN 3 OUT

/ Marking

See Marking Instructions

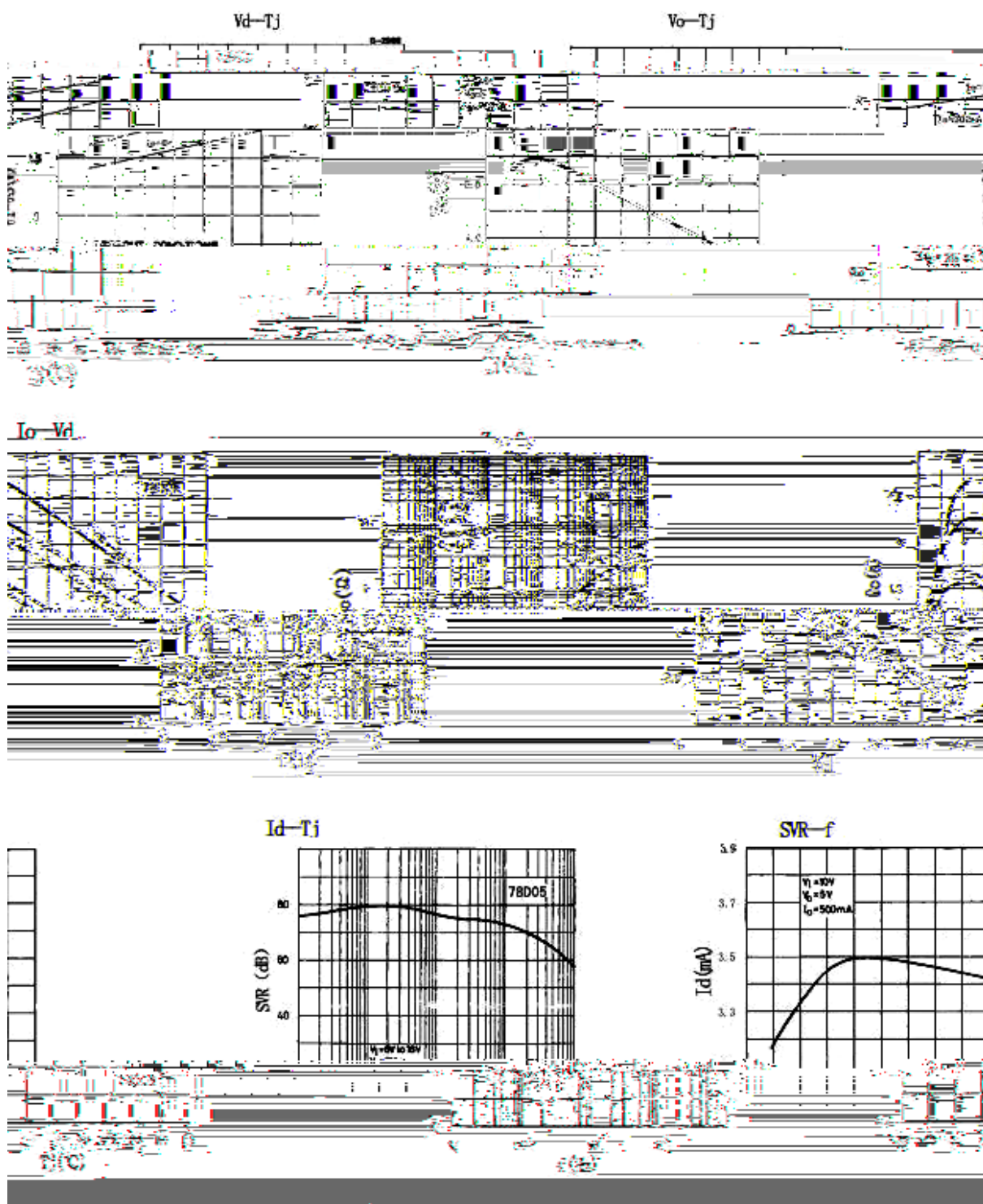
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Input voltage	V_i	35	V
Thermal Resistance Junction-ambient	R_{JA}	65	$^{\circ}\text{C}/\text{W}$
Thermal Resistance Junction-case	R_{JC}	10	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range	T_{OPR}	0 125	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	-65 150	$^{\circ}\text{C}$

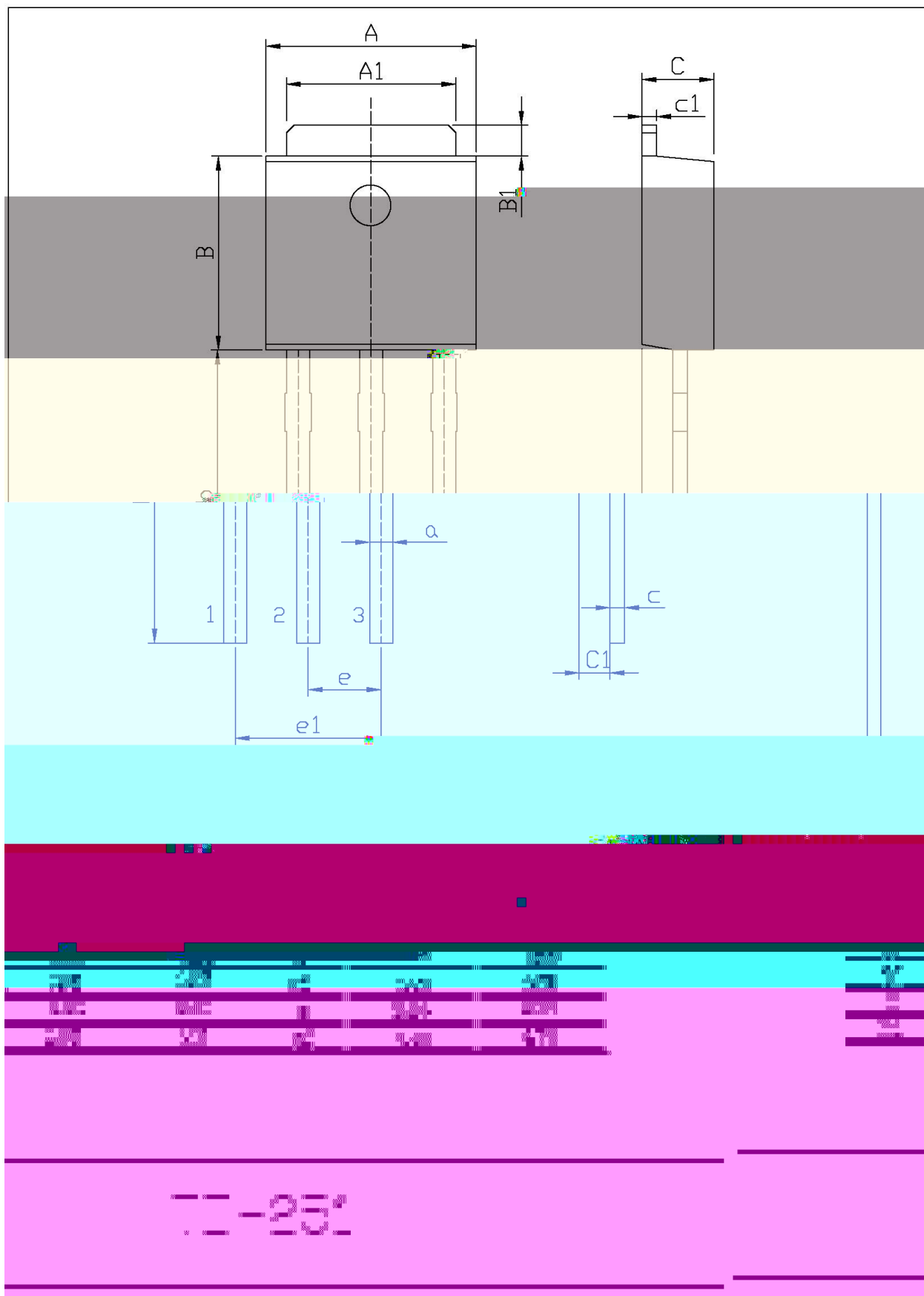
/ Electrical Characteristics(Ta=25 $V_i=10\text{V}, I_o=500\text{mA}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_o	$T_j=25^{\circ}\text{C}$	4.8	5.0	5.2	V
		$V_i=7\text{V}-20\text{V}$ $I_o=5\text{mA}-1\text{A}$ $P_o \leq 15\text{W}$	4.75	5.0	5.25	V
Load Regulation	V_o	$T_j=25^{\circ}\text{C}$ $I_o=5\text{mA}-1.5\text{A}$			100	mV
		$T_j=25$ $I_o=250\text{mA}-750\text{mA}$			50	mV
Line regulation	V_o	$T_j=25^{\circ}\text{C}$ $V_i=7\text{V}-25\text{V}$		3.0	100	mV
		$T_j=25^{\circ}\text{C}$ $V_i=8\text{V}-12\text{V}$		1.0	50	mV
Quiescent Current	I_q	$T_j=25$			8.0	mA
Quiescent Current Change	I_q	$V_i=7\text{V}-25\text{V}$			0.8	mA
		$I_o=5\text{mA}-1\text{A}$			0.5	mA
Output Voltage Drift	V_o/ T	$I_o=5\text{mA}$		-1.1		mV/ $^{\circ}\text{C}$
Output Noise Voltage	eN	B=10Hz-100KHz $T_j=25$			40	V/ V_o
Supply Voltage Rejection	SVR	$V_i=8\text{V}-18\text{V}$ $f=120\text{Hz}$	62			dB
Dropout Voltage	V_d	$I_o=1\text{A}$ $T_j=25$		2.0		V
Output Resistance	R_o	$f=1\text{KHz}$		17		m
Short Circuit Current	I_{sc}	$V_i=35\text{V}$ $T_j=25$		0.75		A
Short Circuit Peak Current	I_{scp}	$T_j=25$		2.2		A

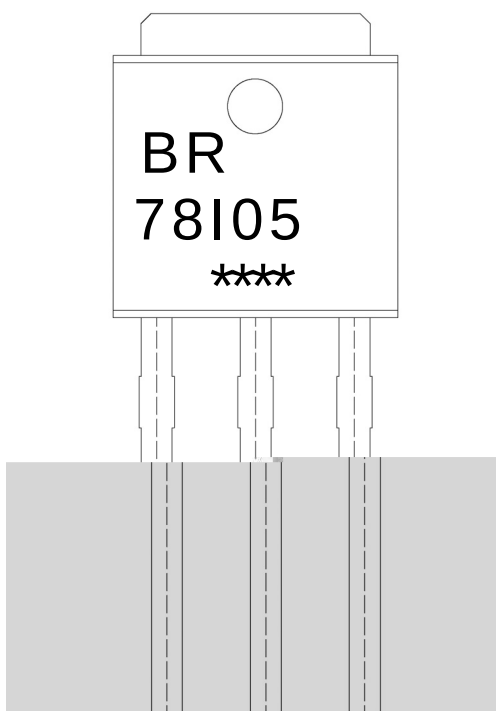
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

78I05

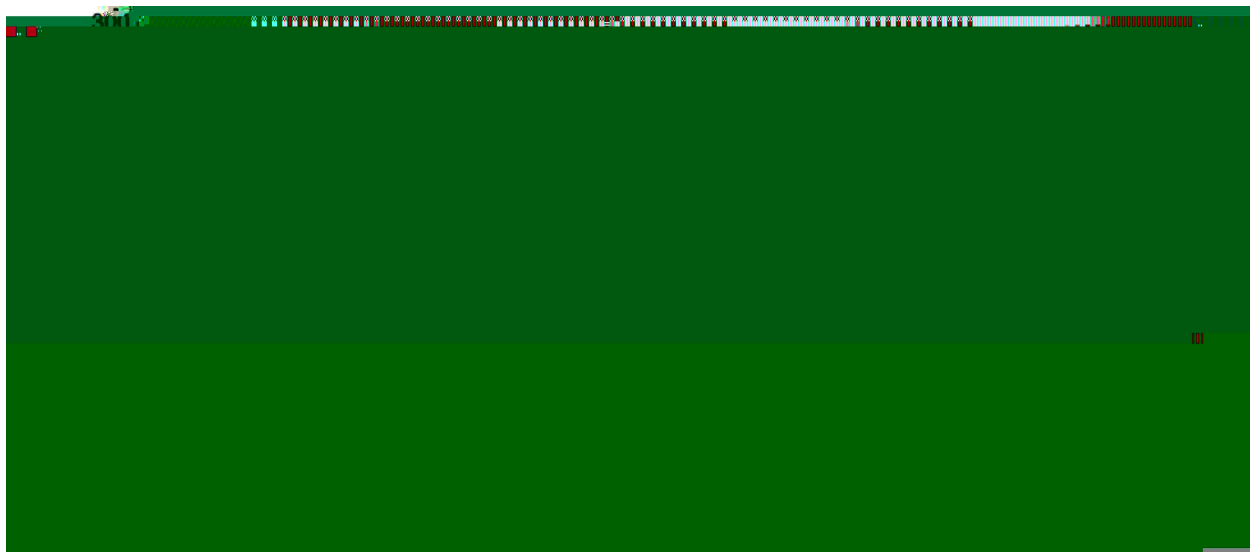
Note:

BR: Company Code.

78I05: Product Type.

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

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-----------|---|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 | | 5±0.5sec; | 2.Peak Temp.:255±5 , Duration:5±0.5sec. | |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

270±5 10±1 sec. Temp:270±5℃ Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量				Dimension 包装尺寸 (unit: mm3)
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	