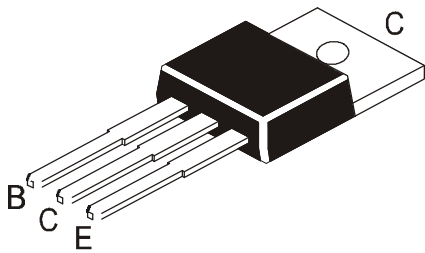


PLASTIC POWER TRANSISTORS

2N6107 PNP
2N6292 NPN

TO-220
Plastic Package



General Purpose Amplifier and Switching Applications

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	80	V
Collector Emitter Voltage	V_{CEO}	70	V
Collector Emitter Voltage ($R_{BE}=100\Omega$)	V_{CER}	80	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current (Peak)	I_{CM}	10	A
Collector Current Continuous	I_C	7	A
Base Current	I_B	3	A
Power Dissipation upto $T_c=25^\circ\text{C}$ Derating factor above 25°C	P_D	40 0.32	W W/ $^\circ\text{C}$
Power Dissipation upto $T_a=25^\circ\text{C}$ Derating factor above 25°C	P_D	2 16	W mW/ $^\circ\text{C}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	- 65 to 150	$^\circ\text{C}$

THERMAL RESISTANCE

Junction to Case	$R_{th(j-c)}$	3.125	$^\circ\text{C/W}$
Junction to Ambient	$R_{th(j-a)}$	62.50	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut off Current	I_{CEO}	$V_{CE}=60\text{V}, I_B=0$			1.0	mA
Collector Cut off Current	I_{CEX}	$V_{EB(off)}=1.5\text{V}; V_{CE}=80\text{V}$			0.1	mA
		$V_{EB(off)}=1.5\text{V}; V_{CE}=70\text{V}; T_c=150^\circ\text{C}$			2.0	mA
Emitter Cut off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			1.0	mA
Collector Emitter (sus) Voltage	$*V_{CEO(sus)}$	$I_C=100\text{mA}, I_B=0$	70			V
Collector Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=3\text{A}, I_B=0.3\text{A}$			1.0	V
		$I_C=7\text{A}, I_B=3.0\text{A}$			3.5	V
Base Emitter on Voltage	$*V_{BE(on)}$	$I_C=2\text{A}, V_{CE}=4\text{V}$			1.5	V
		$I_C=7\text{A}, V_{CE}=4\text{V}$			3.0	V
DC Current Gain	$*h_{FE}$	$I_C=2\text{A}, V_{CE}=4\text{V}$	30		150	
		$I_C=7\text{A}, V_{CE}=4\text{V}$	2.3			

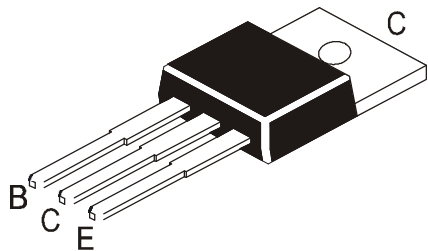
*Pulse Test : Pulse duration $\leq 300\text{ms}$; Duty cycle $\leq 1.5\%$

2N6107_6292Rev_3 190905E

PLASTIC POWER TRANSISTORS

2N6107 PNP
2N6292 NPN

TO-220
Plastic Package



ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise)

DYNAMIC CHARACTERISTIC

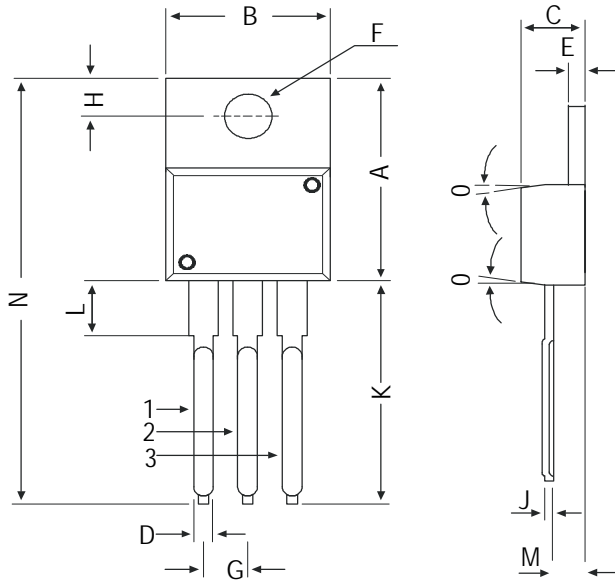
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Small Signal Current Gain	h_{fe}	$I_C=500\text{mA}, V_{CE}=4\text{V}, f=50\text{KHz}$	20			
Output Capacitance	C_{ob}	$I_E=0, V_{CB}=10\text{V}, f=1\text{ MHz}$			250	pF
Transition frequency	f_T	$I_C=500\text{mA}, V_{CE}=4\text{V}$ 2N6107	10			MHz
		2N6292	4			MHz

2N6107_6292Rev_3 190905E

2N6107 PNP
2N6292 NPN

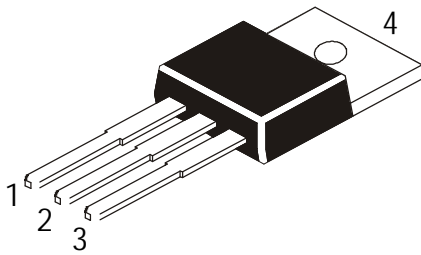
TO-220
Plastic Package

TO-220 Plastic Package



DIM	MIN	MAX
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	—	0.90
E	1.15	1.50
F	3.53	4.10
G	2.29	2.79
H	2.54	3.43
J	0.36	0.61
K	12.70	14.73
L	2.80	6.35
M	2.00	2.92
N	—	31.24
O	7 DEG	

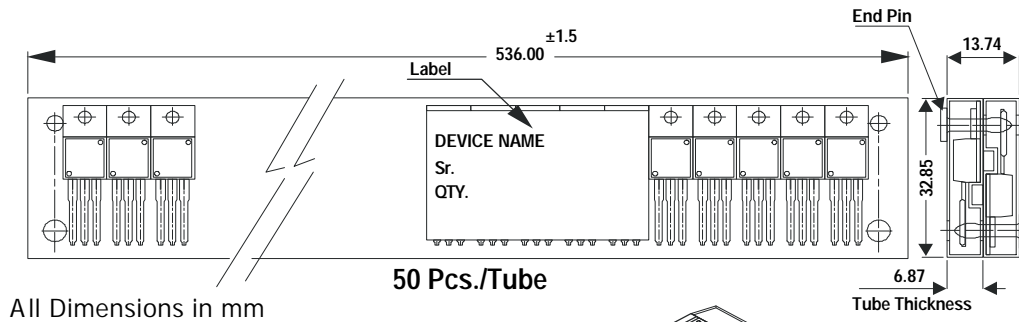
All dimensions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter
4. Collector

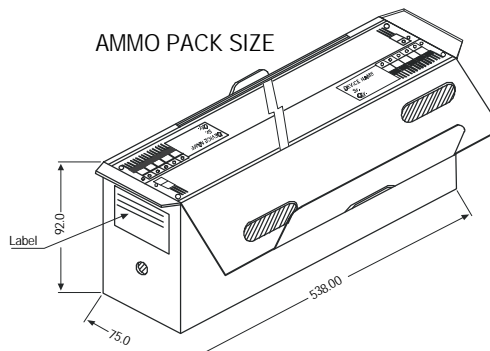
TO-220 Tube Packing



50 Pcs./Tube

All Dimensions in mm

AMMO PACK SIZE



... Packaging Specifications

T & A: Tape and Ammo Pack; T & R: Tape and Reel; Bulk: Loose in Poly Bags; Tube: Tube and Carton; K: 1,000

Package / Case Type	Packaging Type	Std. Packing		Inner Carton		Outer Carton		
		Qty	Qty	Size L x W x H (cm)	Gross Weight (Kg)	Qty	Size L x W x H (cm)	Gross Weight (Kg)
TO-220	Bulk	1,000	1K	19 x 19 x 8	2.0	10K	46 x 38 x 22	21.6
	Tube	1,000 (50 pcs/tube)	1K	55 x 8 x 10	2.8	10K	55 x 35 x 27	28.3

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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