



TO -92 Plastic-Encapsulate Transistors

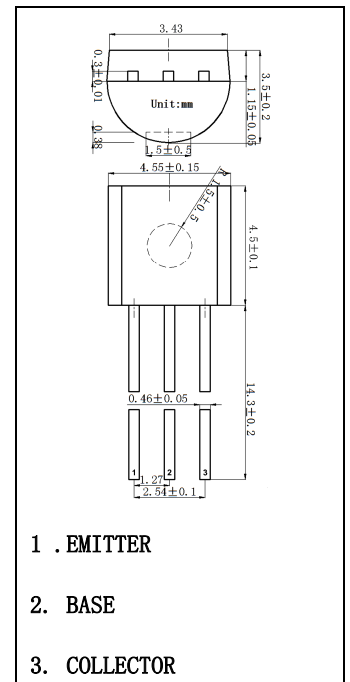
C1008Y338 TRANSISTOR (NPN)

FEATURES

General Purpose Switching and Amplification

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	80	V
V _{CEO}	Collector-Emitter Voltage	60	V
V _{EBO}	Emitter-Base Voltage	8	V
I _C	Collector Current	700	mA
P _C	Collector Power Dissipation	800	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	156	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~150	°C



ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =0.1mA, I _E =0	80			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =10mA, I _B =0	60			V
Emitter-Base breakdown voltage	V _{(BR)EBO}	I _E =0.01mA, I _C =0	8			V
Collector cut-off current	I _{CB0}	V _{CB} =60V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			0.1	μA
DC current gain	h _{FE(1)}	V _{CE} =5V, I _C =1mA	40			
	h _{FE(2)}	V _{CE} =2V, I _C =50mA	40		400	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500 mA, I _B =50mA			0.4	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =500 mA, I _B =50mA			1.1	V
Transition frequency	f _T	V _{CE} =10V, I _C =50mA	30			MHZ
Collector output capacitance	C _{ob}	V _{CE} =10V, I _E =0, f=1MHZ		8		pF

CLASSIFICATION OF h_{FE(1)}

Rank	R	O	Y	G
Range	40-80	70-140	120-240	200-400

Typical Characteristics

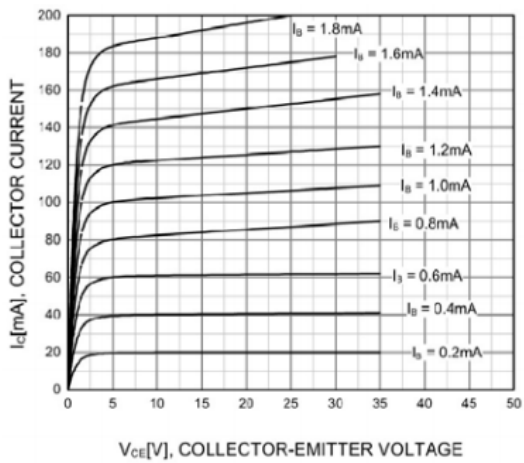


Figure 1. Static Characteristic

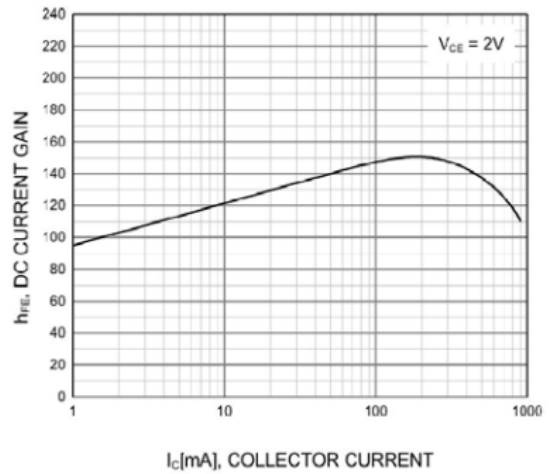


Figure 2. DC current Gain

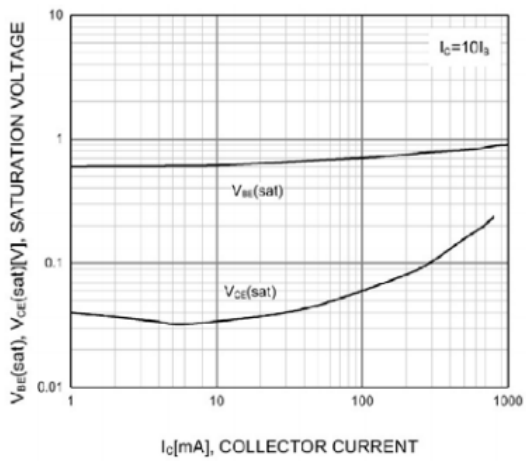


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

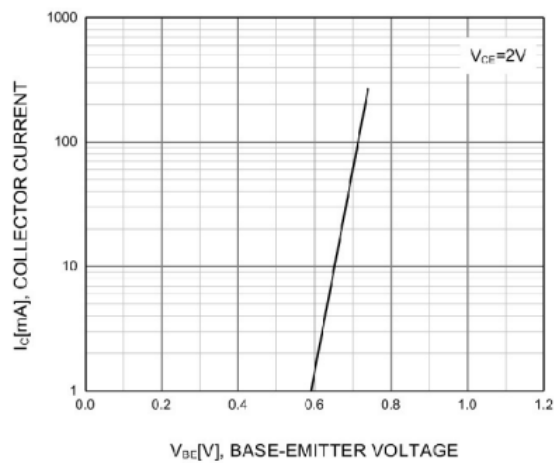


Figure 4. Base-Emitter On Voltage

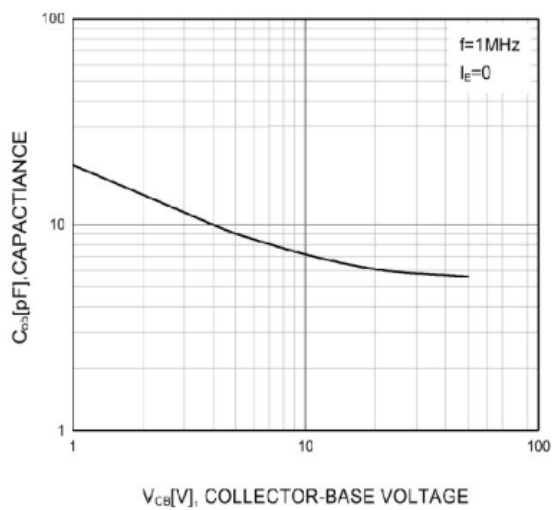
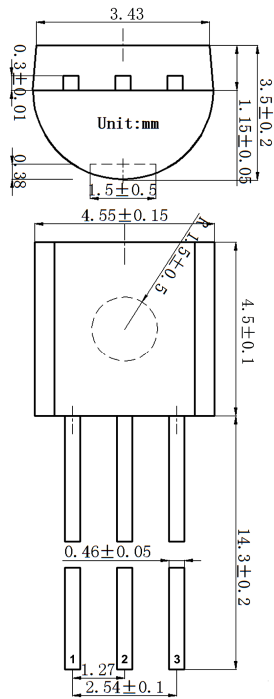
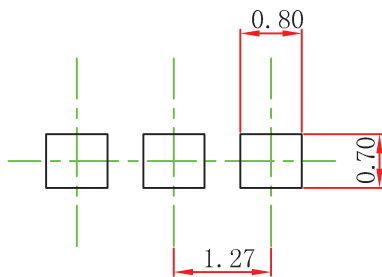


Figure 5. Collector Output Capacitance

TO-92 Package Outline Dimensions



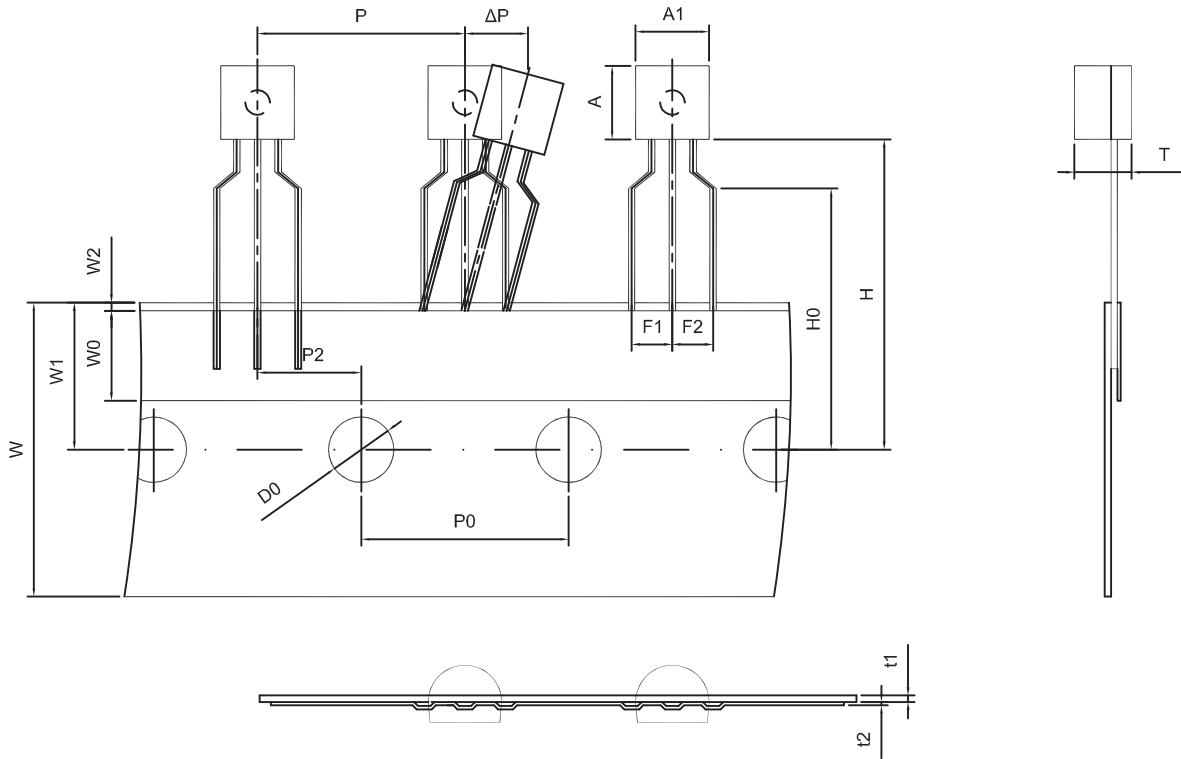
TO-92 Suggested Pad Layout



Note:

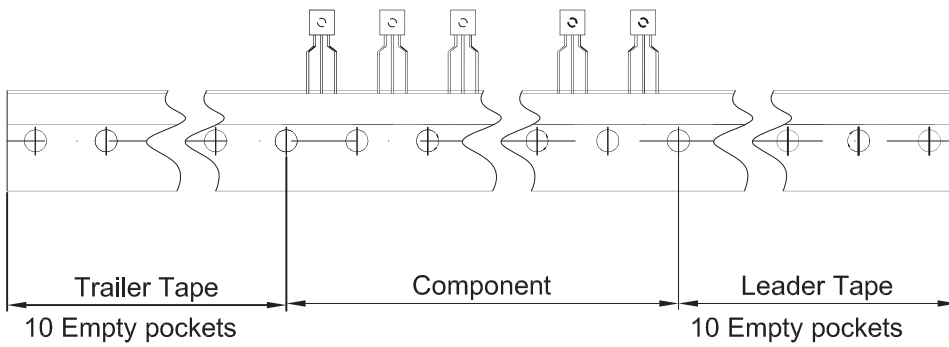
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

TO-92 Tape and Reel



Dimensions are in millimeter

A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250

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