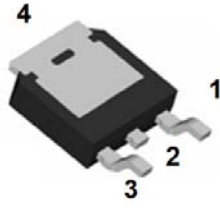
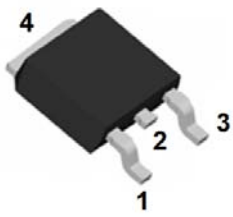
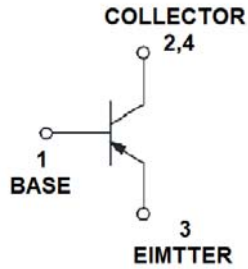


PNP Power Transistors



TO-252



Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

- Designed for general purpose amplifier and low speed switching applications.

Mechanical Data

- Case: TO-252
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Value
Collector-Base Voltage	V_{CBO}	V	-100
Collector-Emitter Voltage	V_{CEO}	V	-100
Emitter-Base Voltage	V_{EBO}	V	-5
Collector Current -Continuous	I_C	A	-3
Total Device Dissipation	P_D	W	1.25
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	°C/W	100
Thermal Resistance, Junction to Mounting Base	$R_{\theta J-mb}$	°C/W	8.3
Junction Temperature	T_j	°C	-55 to +150
Storage Temperature	T_{STG}	°C	-55 to +150

(*) Device mounted on FR-4 PCB 15 x 17 x 0.8 mm



MJD32CQ

■ Electrical Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V_{CBO}	V	$I_C = -1mA, I_E = 0$	-100		
Collector-emitter breakdown voltage	V_{CEO}	V	$I_C = -30mA, I_B = 0$	-100		
Emitter-base breakdown voltage	V_{EBO}	V	$I_E = -1mA, I_C = 0$	-5		
Collector-base cut-off current	I_{CEO}	μA	$V_{CE} = -60V, I_B = 0$			-50
Collector-base cut-off current	I_{CES}	μA	$V_{CE} = -100V, V_{EB} = 0$			-20
Emitter-base cut-off current	I_{EBO}	mA	$V_{EB} = -5V, I_C = 0$			-1
DC current gain	h_{FE}		$V_{CE} = -4V, I_C = -1A$	25		
			$V_{CE} = -4V, I_C = -3A$	10		75
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C = -3A, I_B = -0.375A$			-1.2
Base-emitter voltage	V_{BE}	V	$I_C = -3A, V_{CE} = -4V$			-1.8

■ Other Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Transition frequency	f_T	MHZ	$V_{CE} = 10V, I_C = 0.5A, f = 1KHz$	3		

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MJD32CQ	F1	MJD32C	2500	2500	25000	13"Reel



■ Characteristics(Typical)

Fig.1 - Static characteristic

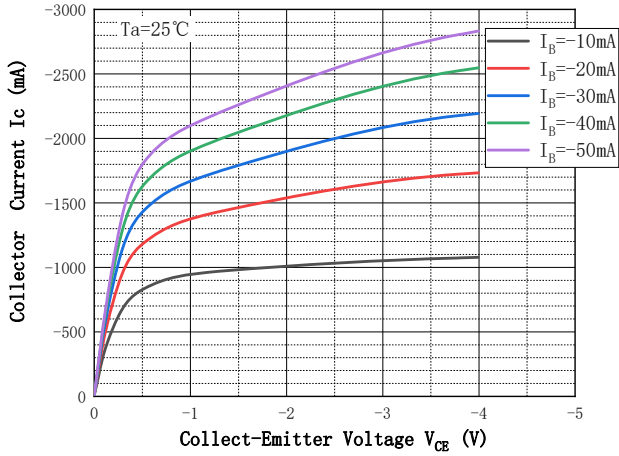


Fig.2 - DC Current Gain

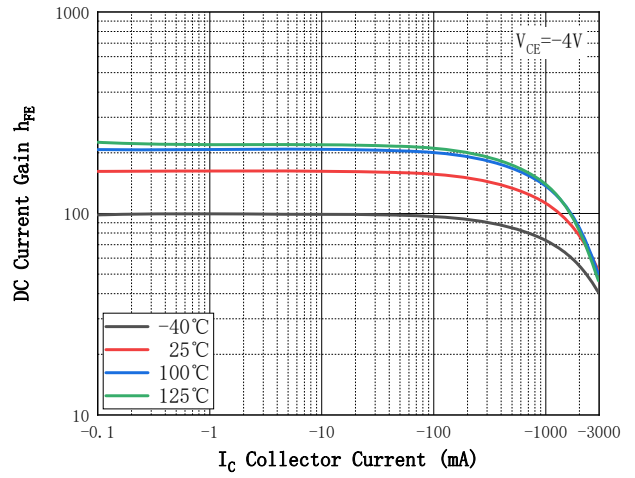


Fig.3 - Collect-Emittor Saturation Voltage

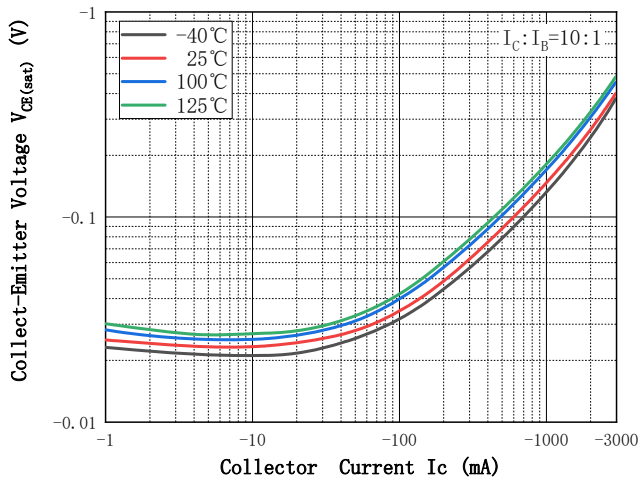


Fig.4 - Base-Emittor Voltage

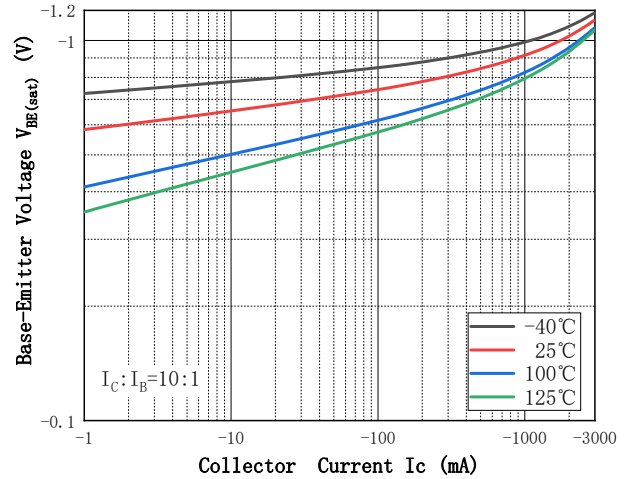


Fig.5 - Base-Emittor On Voltage

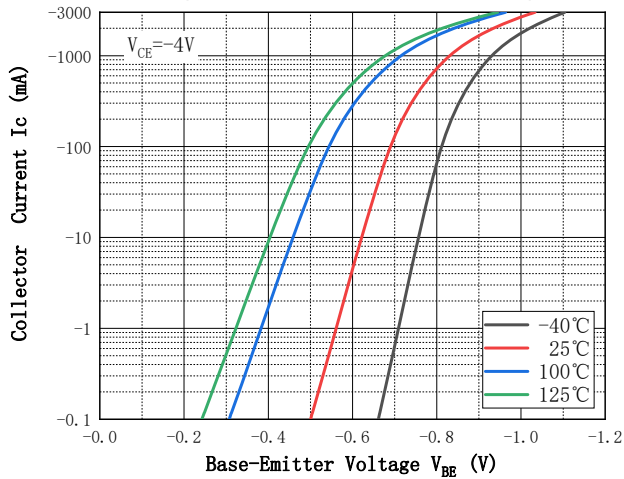


Fig.6 - Cob/Cib—VCB/VEB

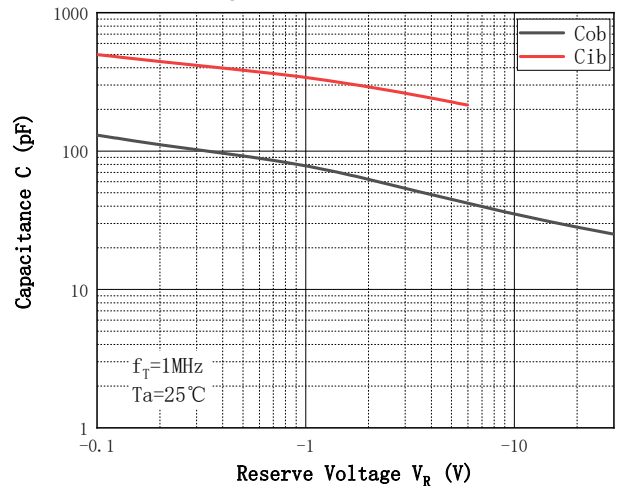




Fig.7 - Transient thermal impedance

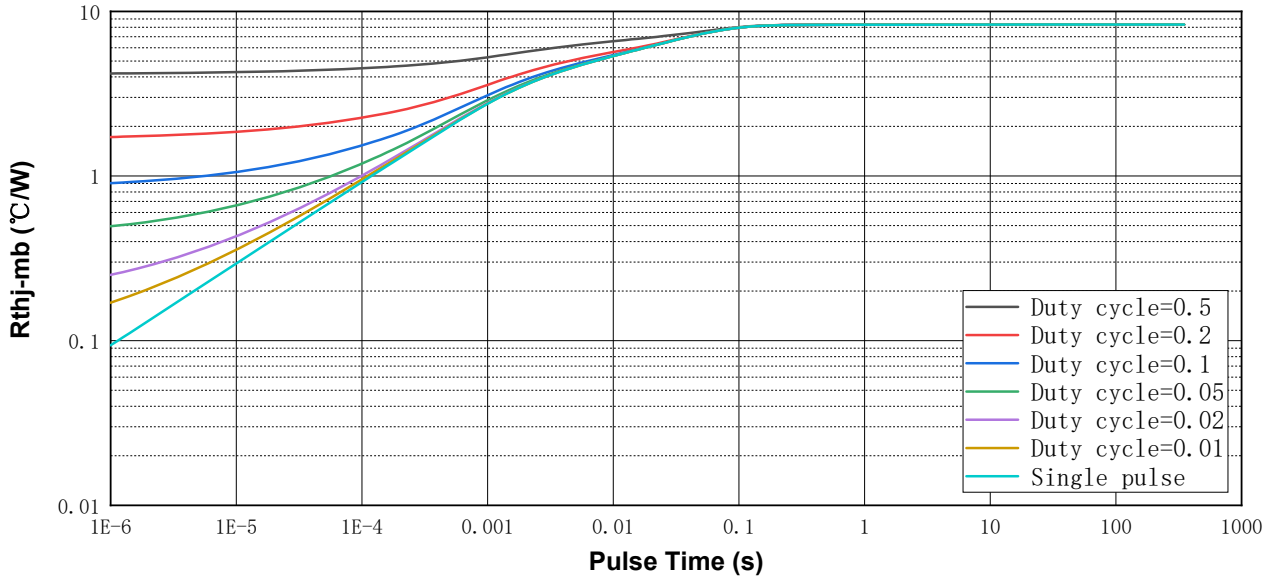


Fig.8 - Collector Power Derating Curve

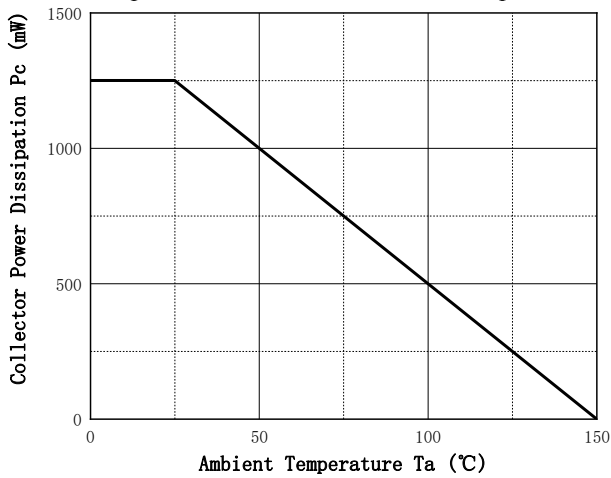
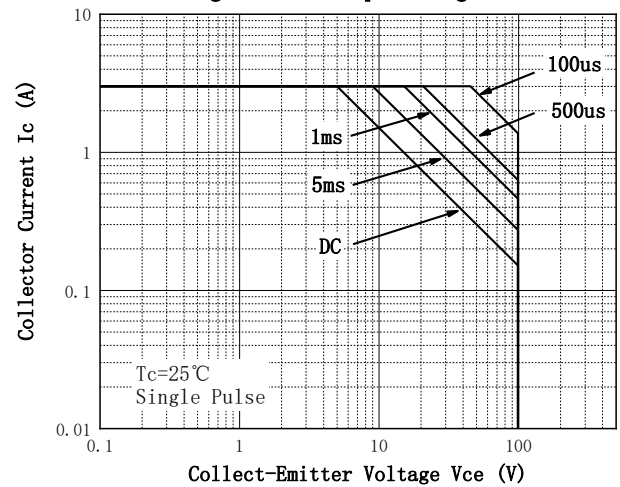


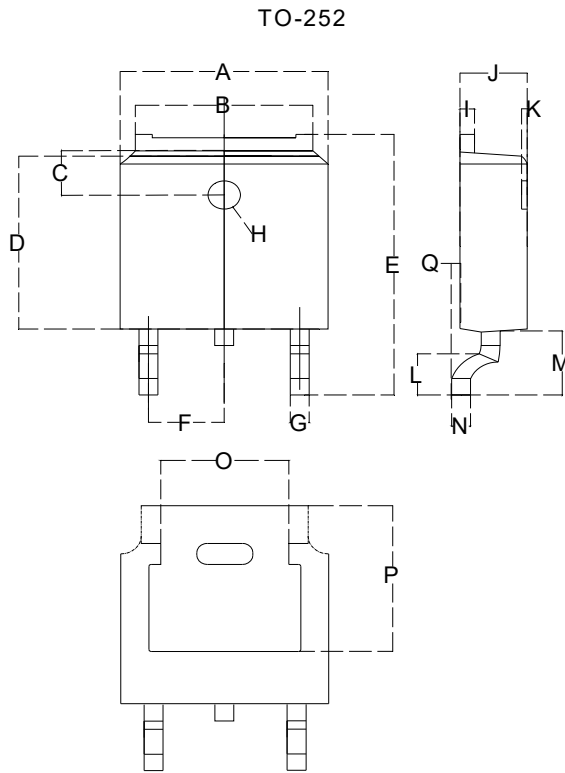
Fig.9 - Safe Operating Area





MJD32CQ

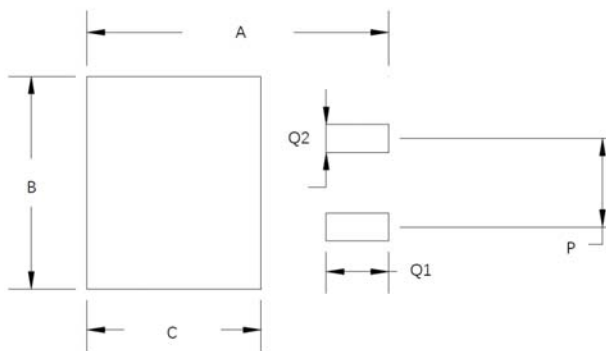
■ TO-252 Package information



Dimensions in millimeters

TO-252		
Dim	Min	Max
A	6.500	6.700
B	5.100	5.460
C	1.400	1.800
D	6.000	6.200
E	10.000	10.400
F	2.166	2.366
G	0.660	0.860
H	Φ 1.050	Φ 1.350
I	0.460	0.580
J	2.200	2.400
K	0	0.300
L	0.890	2.290
M	2.730	3.080
N	0.430	0.580
O	4.20	4.95
P	5.15	5.45
Q	0	0.2

■ Suggested Pad Layout



Dim	Millimeters
A	11.4
B	6.74
C	6.23
P	4.56
Q1	2.28
Q2	1.52



MJD32CQ

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