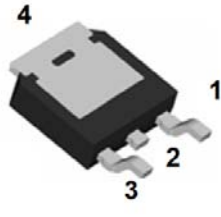
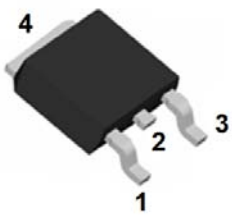
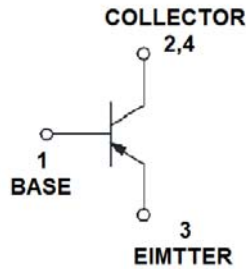


PNP Power Transistors



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	-6
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



MJD42CQ

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

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V_{CBO}	V	$I_C = -0.1mA, I_E = 0$	-100		
Collector-emitter breakdown voltage	V_{CEO}	V	$I_C = -30mA, I_B = 0$	-100		
Emitter-base breakdown voltage	V_{EBO}	V	$I_E = -0.1mA, I_C = 0$	-5		
Collector-base cut-off current	I_{CEO}	μA	$V_{CE} = -60V, I_B = 0$			-50
Emitter-base cut-off current	I_{EBO}	mA	$V_{EB} = -5V, I_C = 0$			-0.5
DC current gain	h_{FE}		$V_{CE} = -4V, I_C = -1A$	30		
			$V_{CE} = -4V, I_C = -3A$	15		75
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C = -6A, I_B = -0.6A$			-1.5
Base-emitter voltage	V_{BE}	V	$I_C = -6A, V_{CE} = -4V$			-2.0

■ 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)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MJD42CQ	F1	MJD42C	2500	2500	25000	13"Reel

■ Characteristics(Typical)

Fig.1 - Collector Saturation Region

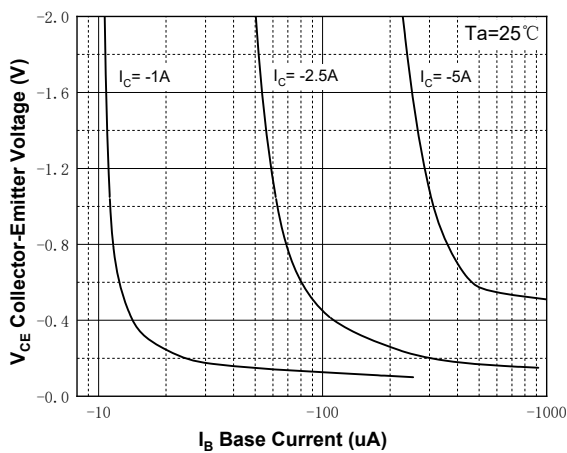
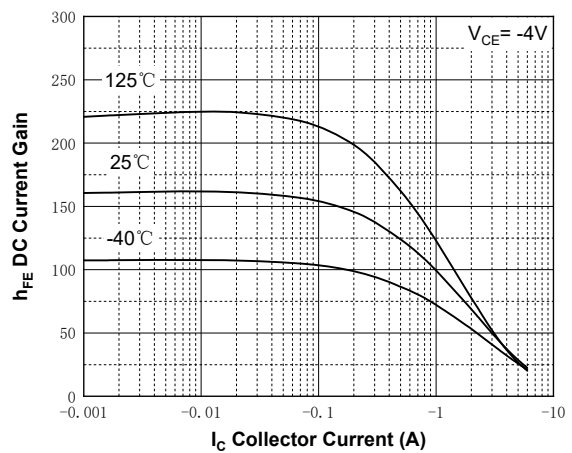


Fig.2 - DC Current Gain





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Fig.3 - Collector-Emitter Saturation Voltage vs. Collector Current

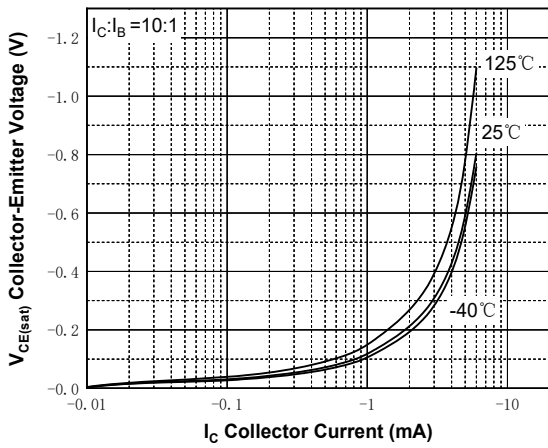


Fig.4 - Base-Emitter Saturation Voltage vs. Collector Current

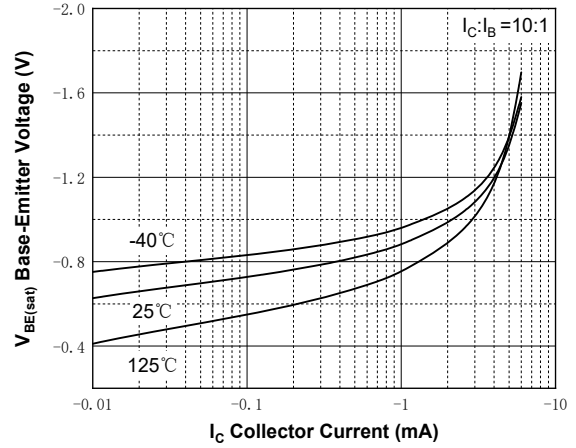


Fig.5 - Capacitance

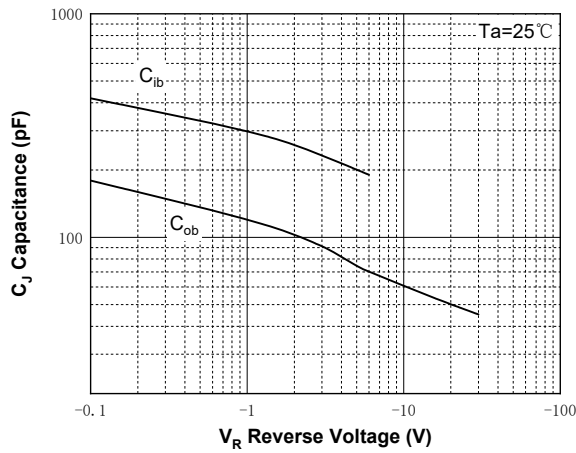
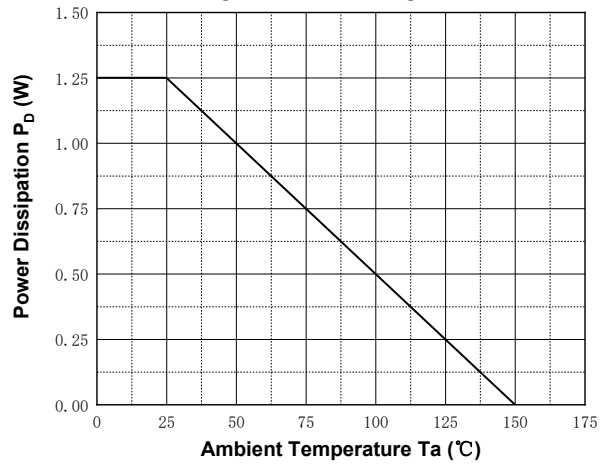


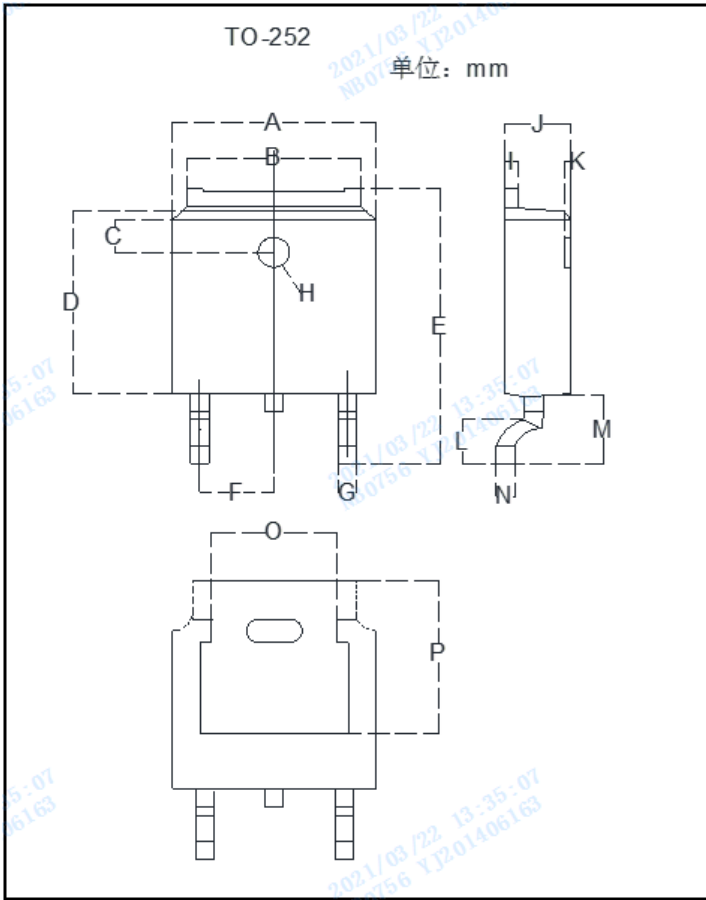
Fig.6 - Power Derating Curve





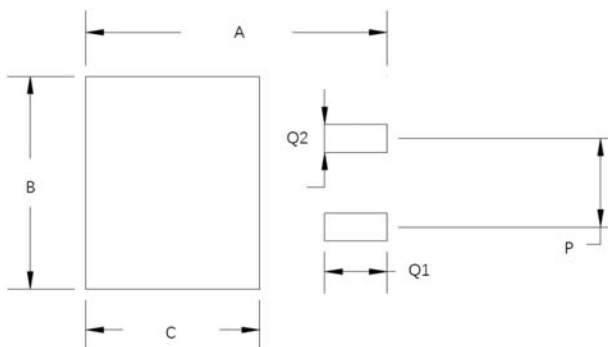
MJD42CQ

■ TO-252 Package information



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.256	0.264	6.50	6.70	
B	0.201	0.215	5.10	5.46	
C	0.055	0.071	1.40	1.80	
D	0.236	0.244	6.00	6.20	
E	0.394	0.409	10.00	10.40	
F	0.085	0.093	2.17	2.37	
G	0.026	0.034	0.66	0.86	
H	Φ0.041	Φ0.531	Φ1.050	Φ1.350	
I	0.018	0.023	0.46	0.58	
J	0.087	0.094	2.20	2.40	
K	0.000	0.012	0.00	0.30	
L	0.035	0.090	0.89	2.29	
M	0.107	0.121	2.73	3.08	
N	0.017	0.023	0.43	0.58	
O	0.165	0.195	4.20	4.95	
P	0.203	0.215	5.15	5.45	

■ Suggested Pad Layout



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



MJD42CQ

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