

MJD42C

DATASHEET

Specification Revision History:

Version	Date	Description
V1.0	2021/12	New
V1.1	2022/05	Modify Ordering Information
V1.2	2024/02	Modify Ordering Information
V1.3	2025/05	Add application precautions and overall typesetting.

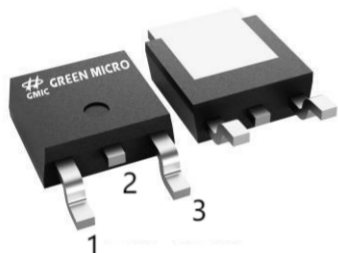
Features

Medium Power Complementary Silicon Transistors

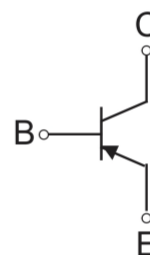
Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter		Unit
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-3	A
P_C	Collector Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	62.5	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

The appearance of the product



1. BASE
2. COLLECTOR
3. EMITTER



TO-252-2

Ordering Information

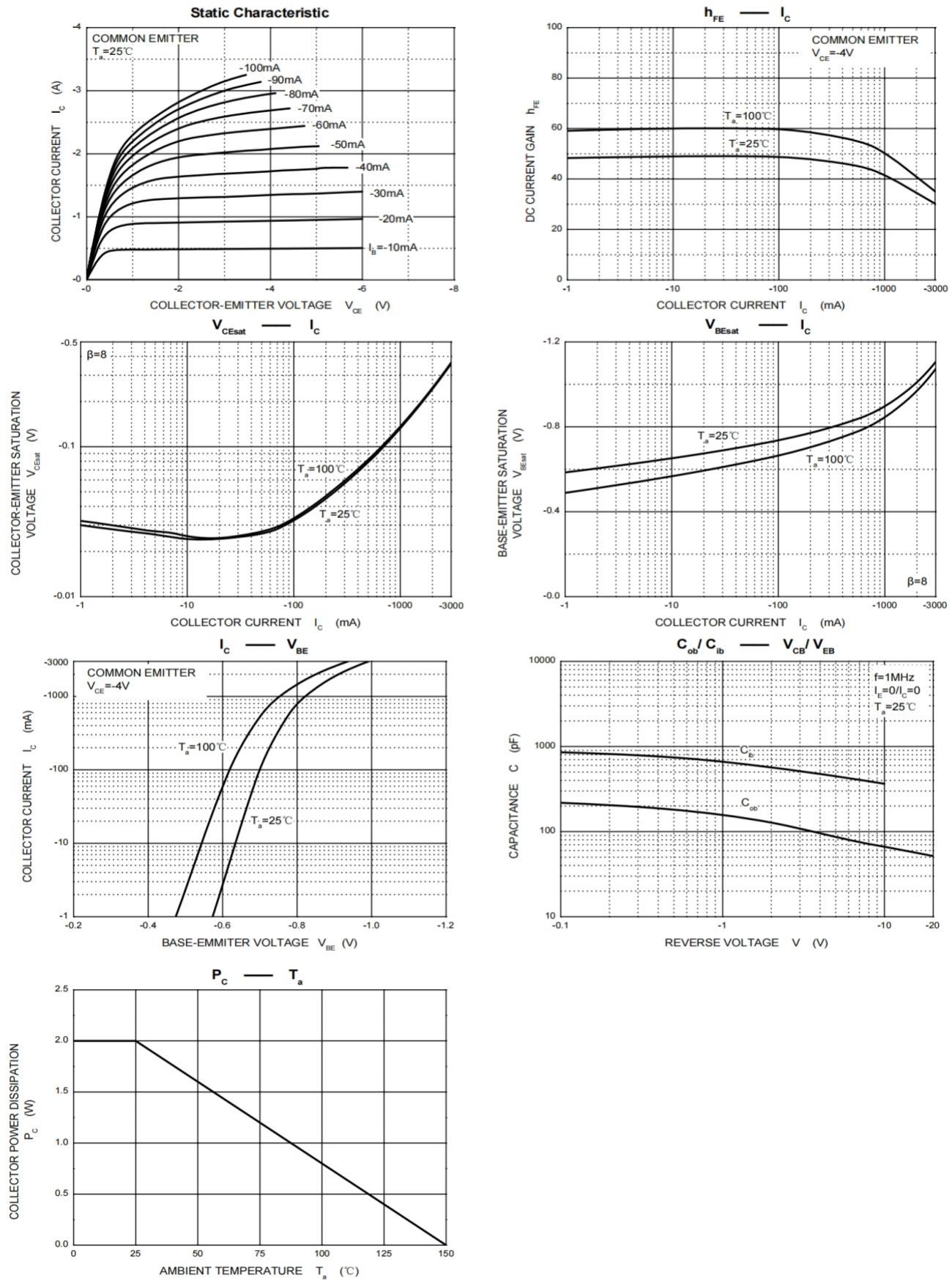
Product Model	Package Type	Packing	Packing Qty
MJD42CGT	TO-252-2	REEL	2500PCS/REEL
MJD42C	TO-252-2	REEL	2500PCS/REEL

Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -1mA, I_E = 0$	-100		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C = -30mA, I_B = 0$	-100		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -1mA, I_C = 0$	-5		V
Collector cut-off current	I_{CBO}	$V_{CB} = -100V, I_E = 0$		-0.2	mA
Collector cut-off current	I_{CEO}	$V_{CE} = -60V, I_B = 0$		-0.3	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$		-1	mA
DC current gain	$h_{FE(1)}$	$V_{CE} = -4V, I_C = -1A$	25		
	$h_{FE(2)}$	$V_{CE} = -4V, I_C = -3A$	15	75	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -3A, I_B = -0.375A$		-1.2	V
Base-emitter voltage	V_{BE}	$V_{CE} = -4V, I_C = -3A$		-1.8	V
Transition frequency	f_T	$V_{CE} = -10V, I_C = -0.5$	3		MHZ

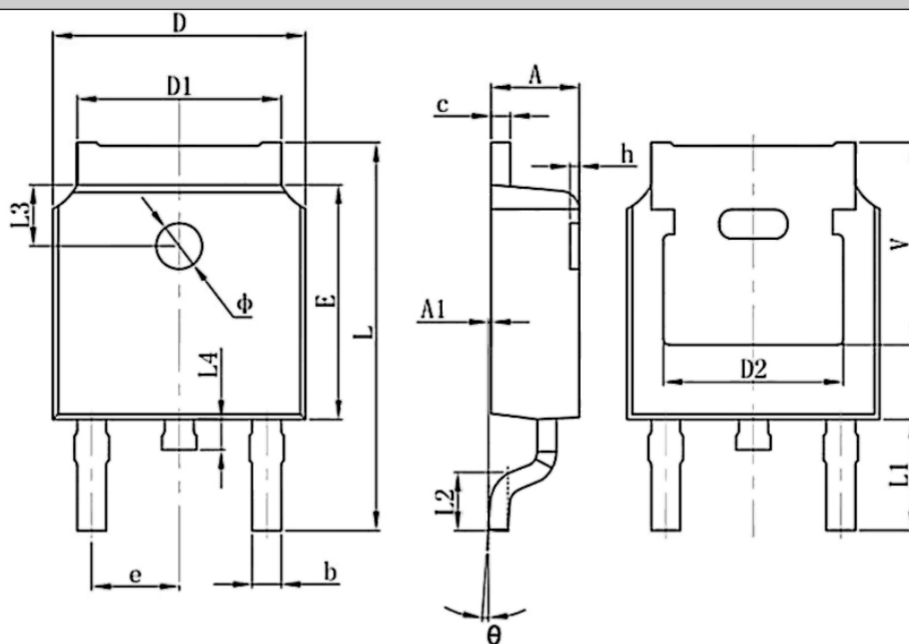
*Pulse test

Typical Characteristics



Outline Dimensions

TO-252-2



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.470	0.570	0.018	0.023
A1	2.220	2.380	0.087	0.094
A2	0.470	0.570	0.018	0.023
B	0.820	0.840	0.032	0.033
B1	2.380	2.480	0.093	0.098
B2	0.500	0.520	0.019	0.021
C	4.250	4.450	0.167	0.176
D	6.000	6.200	0.236	0.245
D1	1.150	1.250	0.045	0.050
E	0.650	0.850	0.025	0.034
E1	6.450	6.750	0.253	0.266
e	2.285 (BSC)		0.090 (BSC)	

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