

EMT2DXV6T5

Dual General Purpose Transistor

PNP Dual

This transistor is designed for general purpose amplifier applications. It is housed in the SOT-563 which is designed for low power surface mount applications.

- Lead-Free Solder Plating
- Low $V_{CE(SAT)}$, < 0.5 V

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	-60	V
Collector-Base Voltage	V_{CBO}	-50	V
Emitter-Base Voltage	V_{EBO}	-6.0	V
Collector Current - Continuous	I_C	-100	mAdc

THERMAL CHARACTERISTICS

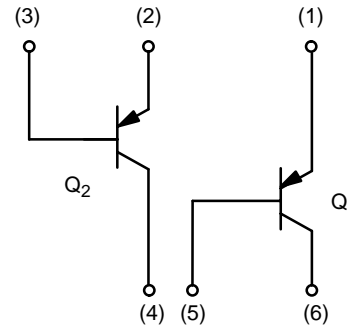
Characteristic (One Junction Heated)	Symbol	Max	Unit
Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	357 (Note 1) 2.9 (Note 1)	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	350 (Note 1)	$^\circ\text{C/W}$
Characteristic (Both Junctions Heated)	Symbol	Max	Unit
Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	500 (Note 1) 4.0 (Note 1)	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	250 (Note 1)	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

1. FR-4 @ Minimum Pad.

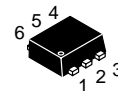


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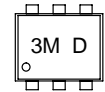
<http://onsemi.com>



MARKING DIAGRAM



SOT-563
CASE 463A
Style 2



3M = Specific Device Code
D = Date Code

ORDERING INFORMATION

Device	Package	Shipping†
EMT2DXV6T5	SOT-563	2 mm Pitch 8000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

EMT2DXV6T5

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

Characteristic	Symbol	Min	Typ	Max	Unit
Collector–Base Breakdown Voltage (I _C = –50 μAdc, I _E = 0)	V _{(BR)CBO}	–60	–	–	Vdc
Collector–Emitter Breakdown Voltage (I _C = –1.0 mAdc, I _B = 0)	V _{(BR)CEO}	–50	–	–	Vdc
Emitter–Base Breakdown Voltage (I _E = –50 μAdc, I _C = 0)	V _{(BR)EBO}	–6.0	–	–	Vdc
Collector–Base Cutoff Current (V _{CB} = –30 Vdc, I _E = 0)	I _{CBO}	–	–	–0.5	nA
Emitter–Base Cutoff Current (V _{EB} = –5.0 Vdc, I _B = 0)	I _{EBO}	–	–	–0.5	μA
Collector–Emitter Saturation Voltage (Note 2) (I _C = –50 mAdc, I _B = –5.0 mAdc)	V _{CE(sat)}	–	–	–0.5	Vdc
DC Current Gain (Note 2) (V _{CE} = –6.0 Vdc, I _C = –1.0 mAdc)	h _{FE}	120	–	560	–
Transition Frequency (V _{CE} = –12 Vdc, I _C = –2.0 mAdc, f = 30 MHz)	f _T	–	140	–	MHz
Output Capacitance (V _{CB} = –12 Vdc, I _E = 0 Adc, f = 1 MHz)	C _{OB}	–	3.5	–	pF

2. Pulse Test: Pulse Width ≤ 300 μs, D.C. ≤ 2%.

EMT2DXV6T5

TYPICAL ELECTRICAL CHARACTERISTICS

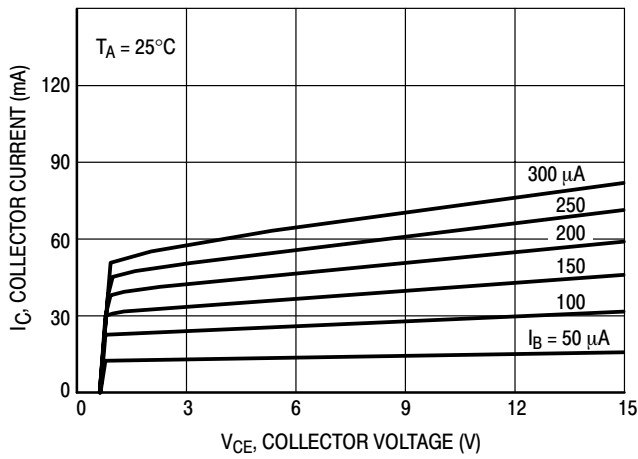


Figure 1. $I_C - V_{CE}$

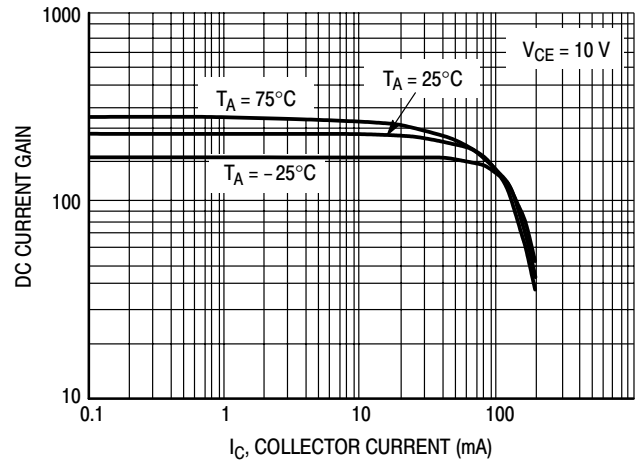


Figure 2. DC Current Gain

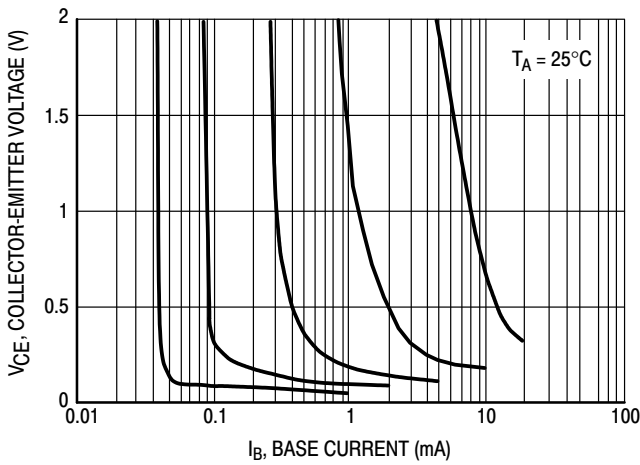


Figure 3. Collector Saturation Region

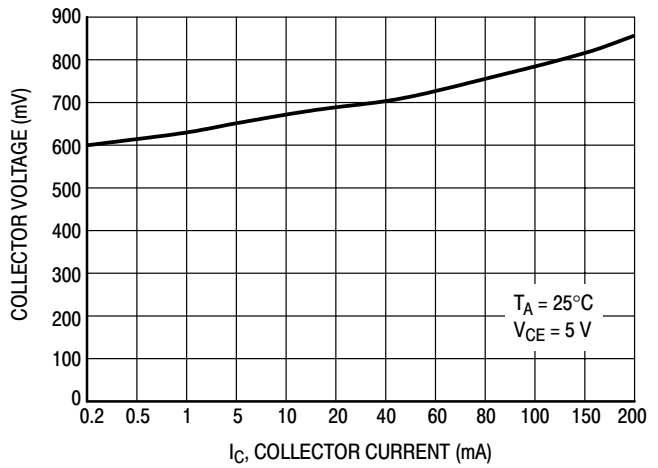


Figure 4. On Voltage

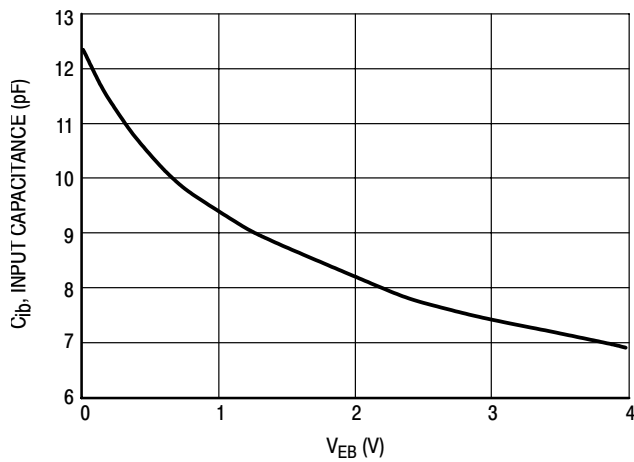


Figure 5. Capacitance

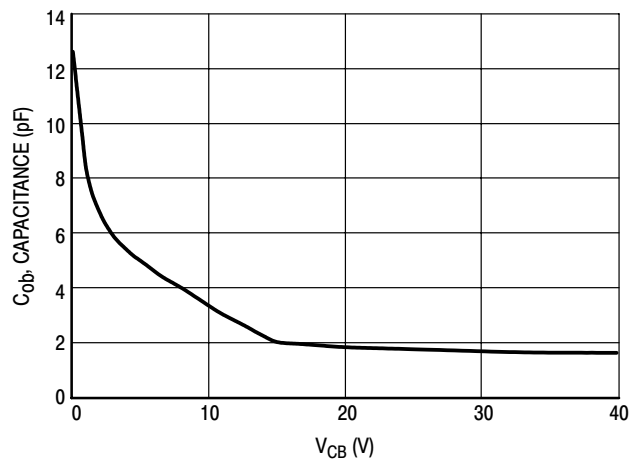


Figure 6. Capacitance

MECHANICAL CASE OUTLINE

PACKAGE DIMENSIONS

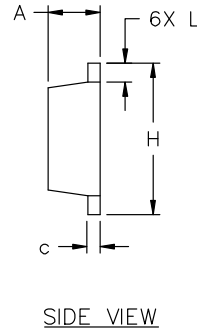
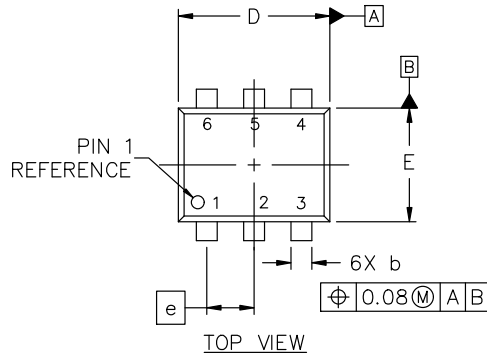


SOT-563-6 1.60x1.20x0.55, 0.50P
CASE 463A
ISSUE J

DATE 15 FEB 2024

NOTES:

1. DIMENSIONING AND TOLERANCING CONFORM TO ASME Y14.5-2018.
2. ALL DIMENSION ARE IN MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.



DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	0.50	0.55	0.60
b	0.17	0.22	0.27
c	0.08	0.13	0.18
D	1.50	1.60	1.70
E	1.10	1.20	1.30
e	0.50 BSC		
H	1.50	1.60	1.70
L	0.10	0.20	0.30

STYLE 1:
 PIN 1. EMITTER 1
 2. BASE 1
 3. COLLECTOR 2
 4. EMITTER 2
 5. BASE 2
 6. COLLECTOR 1

STYLE 2:
 PIN 1. EMITTER 1
 2. EMITTER 2
 3. BASE 2
 4. COLLECTOR 2
 5. BASE 1
 6. COLLECTOR 1

STYLE 3:
 PIN 1. CATHODE 1
 2. CATHODE 1
 3. ANODE/ANODE 2
 4. CATHODE 2
 5. CATHODE 2
 6. ANODE/ANODE 1

STYLE 4:
 PIN 1. COLLECTOR
 2. COLLECTOR
 3. BASE
 4. EMITTER
 5. COLLECTOR
 6. COLLECTOR

STYLE 5:
 PIN 1. CATHODE
 2. CATHODE
 3. ANODE
 4. ANODE
 5. CATHODE
 6. CATHODE

STYLE 6:
 PIN 1. CATHODE
 2. ANODE
 3. CATHODE
 4. CATHODE
 5. CATHODE
 6. CATHODE

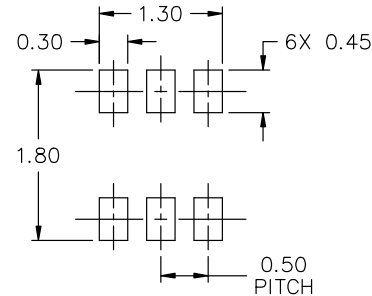
STYLE 7:
 PIN 1. CATHODE
 2. ANODE
 3. CATHODE
 4. CATHODE
 5. ANODE
 6. CATHODE

STYLE 8:
 PIN 1. DRAIN
 2. DRAIN
 3. GATE
 4. SOURCE
 5. DRAIN
 6. DRAIN

STYLE 9:
 PIN 1. SOURCE 1
 2. GATE 1
 3. DRAIN 2
 4. SOURCE 2
 5. GATE 2
 6. DRAIN 1

STYLE 10:
 PIN 1. CATHODE 1
 2. N/C
 3. CATHODE 2
 4. ANODE 2
 5. N/C
 6. ANODE 1

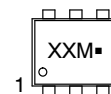
STYLE 11:
 PIN 1. EMITTER 2
 2. BASE 2
 3. COLLECTOR 1
 4. EMITTER 1
 5. BASE 1
 6. COLLECTOR 2



RECOMMENDED MOUNTING FOOTPRINT*

* FOR ADDITIONAL INFORMATION ON OUR Pb-FREE STRATEGY AND SOLDERING DETAILS, PLEASE DOWNLOAD THE ON SEMICONDUCTOR SOLDERING AND MOUNTING TECHNIQUES REFERENCE MANUAL, SOLDERRM/D.

GENERIC MARKING DIAGRAM*



XX = Specific Device Code
 M = Month Code
 ■ = Pb-Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "■", may or may not be present. Some products may not follow the Generic Marking.

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DESCRIPTION:	SOT-563-6 1.60x1.20x0.55, 0.50P	PAGE 1 OF 1

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