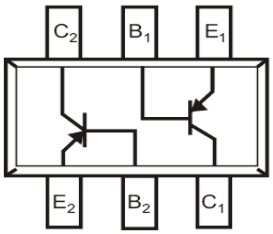
Dual PNP Small Signal Surface Mount Transistor MMDT4403

FEATURES

- Epitaxial planar die construction.
- Ultra-small surface mount package.
- Also available in lead free version.
- Power dissipation:P_{tot}=0.2W.

Lead-free



SOT-363

APPLICATIONS

- General switching and amplification

ORDERING INFORMATION

Type No.	Marking	Package Code
MMDT4403	K2T	SOT-363

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	collector-base voltage	-40	V
V_{CEO}	collector-emitter voltage	-40	V
V_{EBO}	emitter-base voltage	-5	V
I_C	collector current -continuous	-0.6	A
P_{tot}	total power dissipation	-0.2	W
T_{stg}	storage temperature	150	°C
T_j	junction temperature	-55 to +150	°C

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=-100μA,I_E=0	-40		V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=-1mA,I_B=0	-40		V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=-100μA,I_C=0	-5		V
I_{BL}	Base cut-off current	$I_{EB(OFF)}$=-0.4V ,V_{CB} = -35V	-	-0.1	μA
I_{CEX}	collector cut-off current	$I_{EB(OFF)}$=-0.4V ,V_{CB} = -35V	-	-0.1	μA
h_{FE}	DC current gain	V_{CE} =-1V,I_C= -0.1mA V_{CE} =-1V,I_C =-1mA V_{CE} =-1V,I_C =-10mA V_{CE} =-2V,I_C =-150mA V_{CE} =-2V,I_C =-500mA	30 60 100 100 20	- - - 300 -	
$V_{CE(sat)}$	collector-emitter saturation voltage	I_C =-150mA,I_B =-15mA	-	-0.4	V
		I_C =-500mA,I_B =-50mA	-	-0.75	V
$V_{BE(sat)}$	base-emitter saturation voltage	I_C =-150mA,I_B =-15mA	-0.75	-0.95	V
		I_C =-500mA, I_B =-50mA	-	-1.3	V
C_{ob}	Output capacitance	I_E =0, V_{CB} =-10V; f =1MHz	-	8.5	pF
f_T	transition frequency	I_C=-20mA,V_{CE}=-10V,f=100MHz	200	-	MHz
t_d	delay time	V_{CC}=-30V,V_{BE}=-2V I_C=-150mA I_{B1}=-15mA	-	15	ns
t_r	rise time		-	20	ns
t_s	storage time	V_{CC}=-30V,I_C=-150mA I_{B1}=I_{B2}=-15mA	-	225	ns
t_f	fall time		-	30	ns

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TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

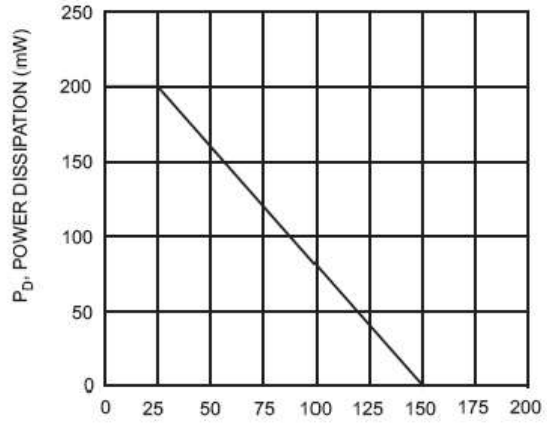

Fig. 1, Max Power Dissipation vs Ambient Temperature

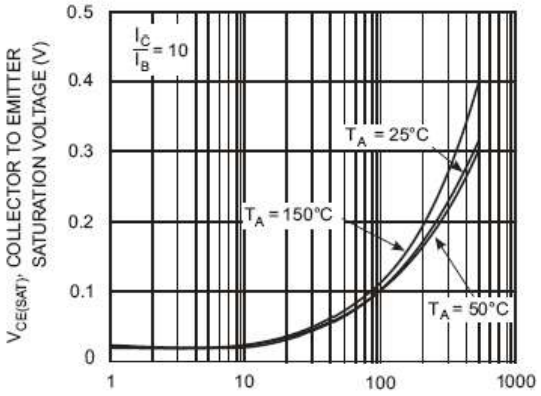

Fig. 2 Collector Emitter Saturation Voltage vs. Collector Current

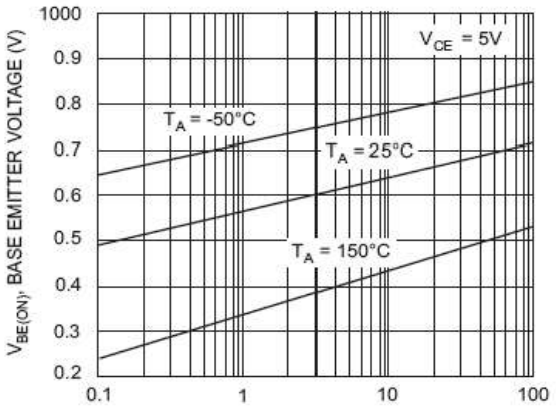

Fig. 3 Base-Emitter Voltage vs. Collector Current

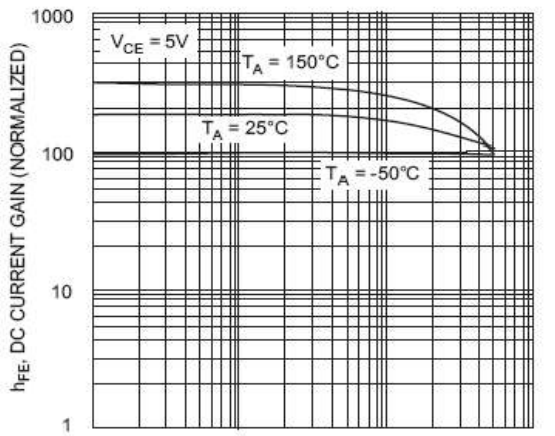

Fig. 4 DC Current Gain vs. Collector Current

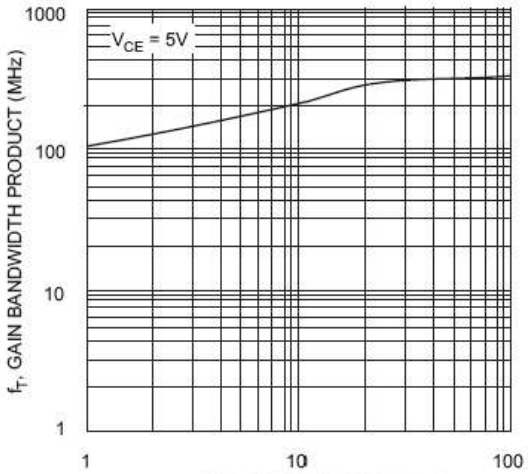

Fig. 5 Gain Bandwidth Product vs. Collector Current

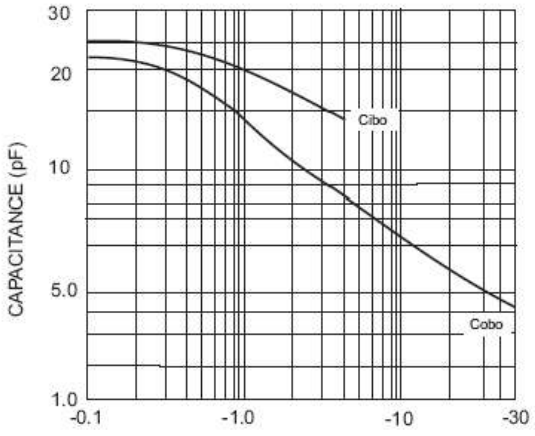

Fig. 6 Typical Capacitance

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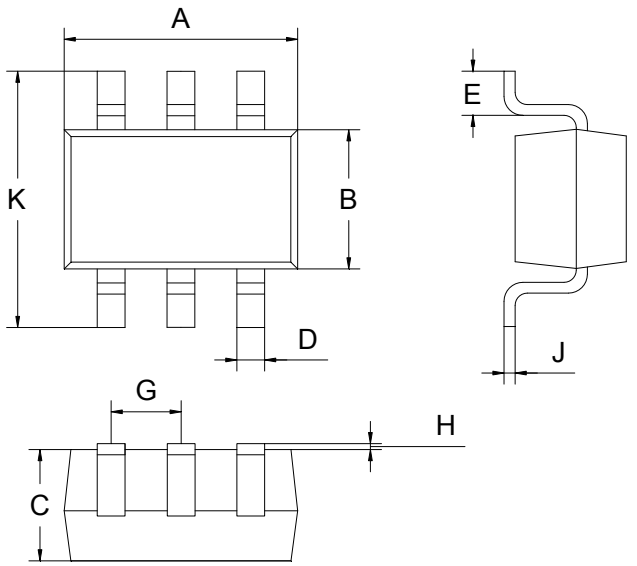
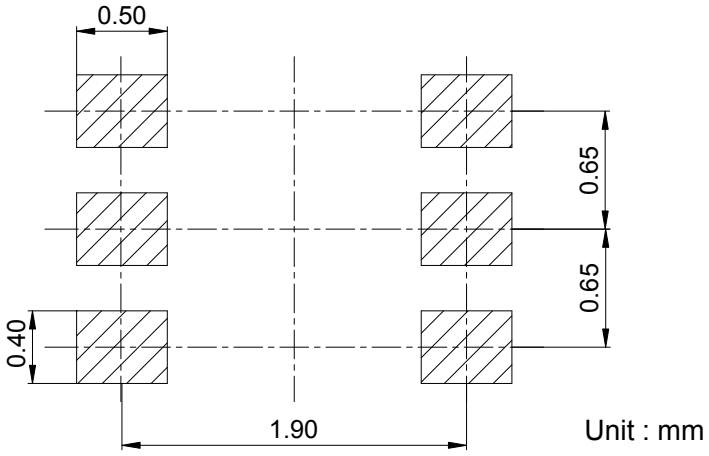
PACKAGE OUTLINE

Plastic surface mounted package SOT-363



SOT-363		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.95 Typical	
D	0.25 Typical	
E	0.25	0.40
G	0.60	0.70
H	0.02	0.10
J	0.10 Typical	
K	2.2	2.4
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
MMDT4403	SOT-363	3000/Tape&Reel