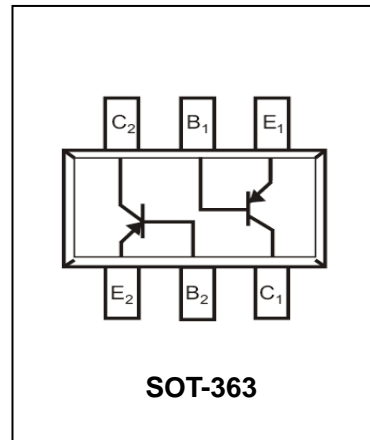


Dual PNP Small Signal Surface Mount Transistor

MMDT4403

FEATURES

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



APPLICATIONS

- General switching and amplification

ORDERING INFORMATION

Type No.	Marking	Package Code
MMDT4403	K2T	SOT-363

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ 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	$^\circ\text{C}$
T_j	junction temperature	-55-150	$^\circ\text{C}$

Dual PNP Small Signal Surface Mount Transistor **MMDT4403**

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -100\mu A, I_E = 0$	-40		V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1mA, I_B = 0$	-40		V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -100\mu A, I_C = 0$	-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	$V_{CE} = -1V, I_C = -0.1mA$	30	-	
		$V_{CE} = -1V, I_C = -1mA$	60	-	
		$V_{CE} = -1V, I_C = -10mA$	100	-	
		$V_{CE} = -1V, I_C = -150mA$	100	300	
		$V_{CE} = -1V, I_C = -500mA$	20	-	
$V_{CE(sat)}$	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	$V_{CC} = -30V, V_{BE} = -2V, I_C = -150mA$	-	15	ns
t_r	rise time	$I_{B1} = -15mA$	-	20	ns
t_s	storage time	$V_{CC} = -30V, I_C = -150mA$	-	225	ns
t_f	fall time	$I_{B1} = I_{B2} = -15mA$	-	30	ns

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Dual PNP Small Signal Surface Mount Transistor

MMDT4403

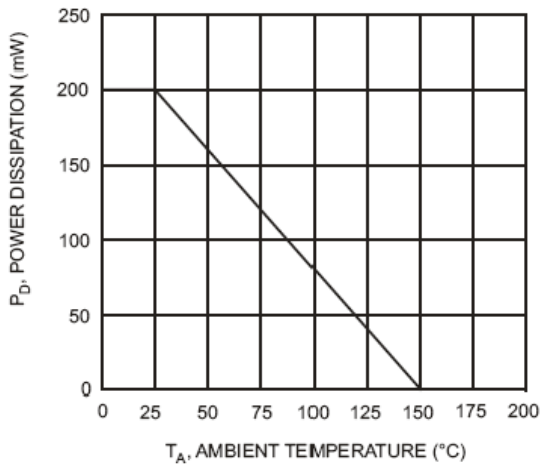


Fig. 1. Max Power Dissipation vs Ambient Temperature

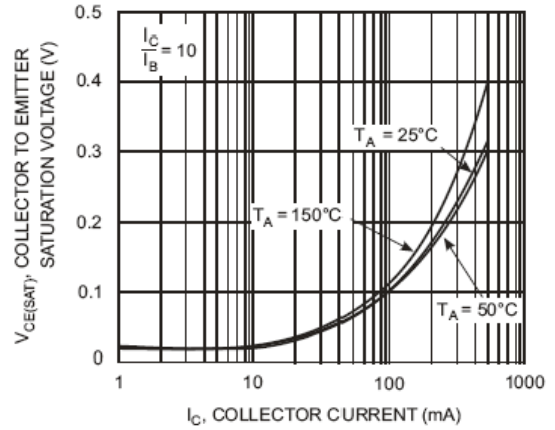


Fig. 2. Collector Emitter Saturation Voltage vs. Collector Current

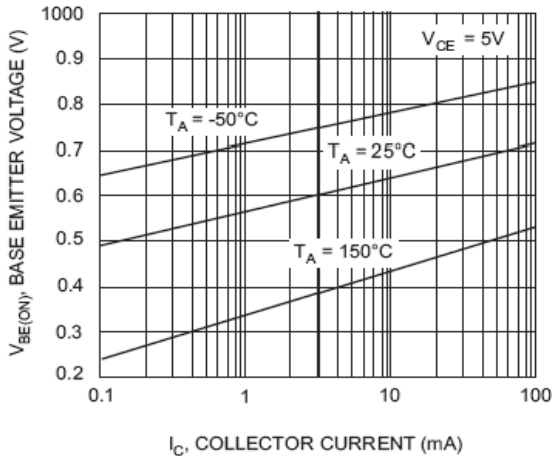


Fig. 3. Base-Emitter Voltage vs. Collector Current

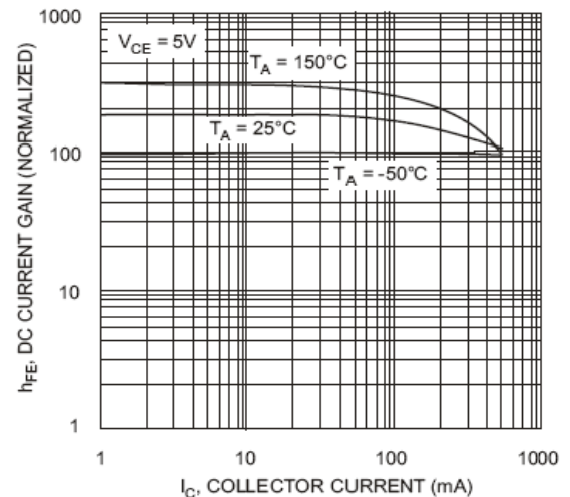


Fig. 4. DC Current Gain vs. Collector Current

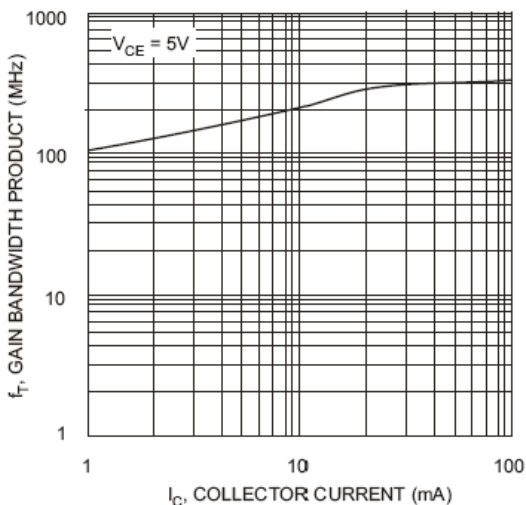


Fig. 5. Gain Bandwidth Product vs. Collector Current

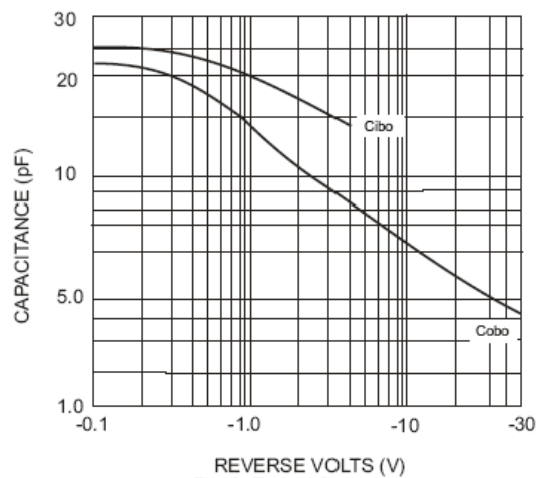


Fig. 6. Typical Capacitance

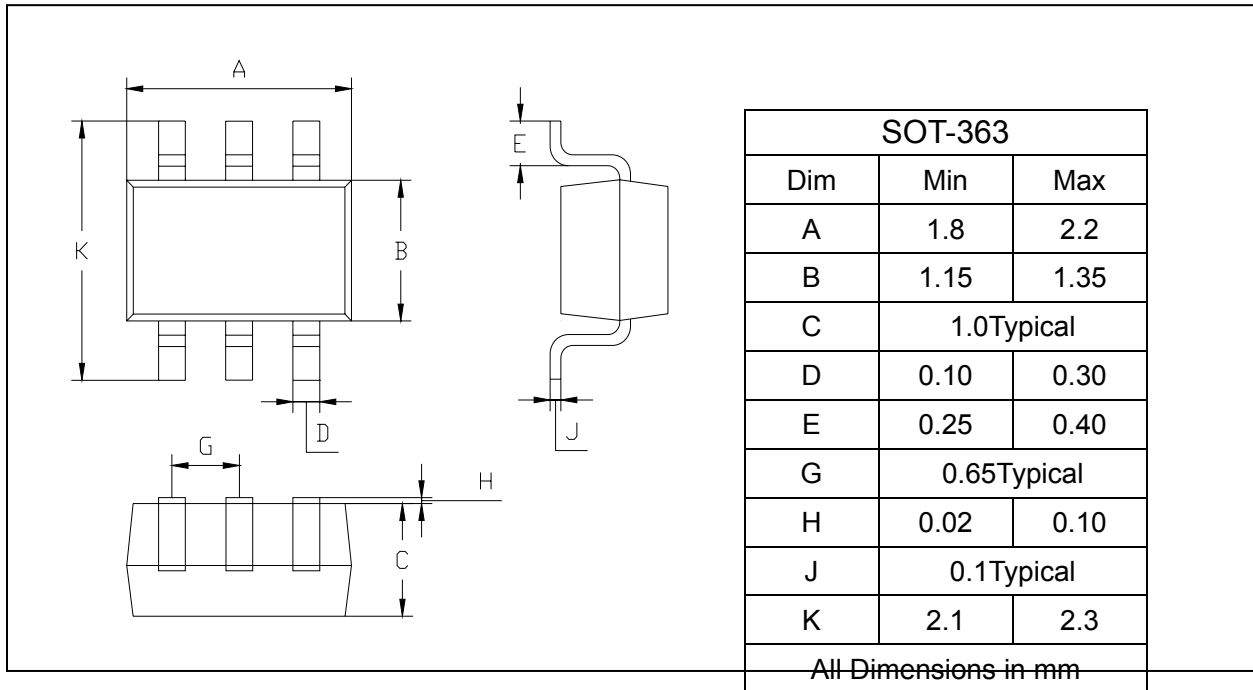
PACKAGE OUTLINE

Dual PNP Small Signal Surface Mount Transistor

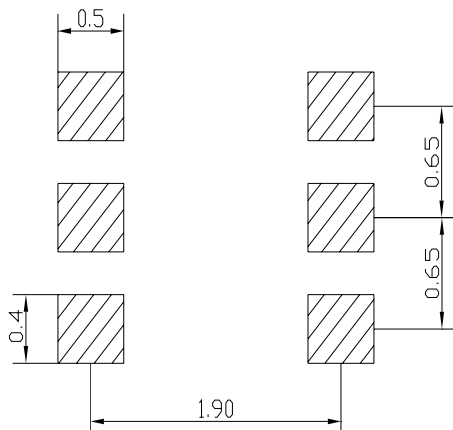
MMDT4403

Plastic surface mounted package

SOT-363



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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