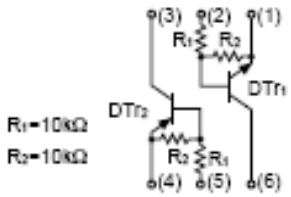
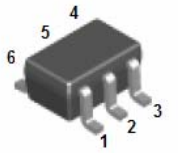
General purpose transistor UMD3N

FEATURES

- Both the DTA114E chip and DTC114E chip in a EMT or UMT or SMT package.
- Mounting possible with EMT3 or UMT3 or SMT3 automatic mounting machines.
- Transistor elements are independent, eliminating interference.
- Mounting cost and area can be cut in half.

Lead-free





SOT-363

APPLICATIONS

- NPN/PNP epitaxial planar silicon transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
UMD3N	D3	SOT-363

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	50	V
V_{IN}	Input Voltage	-10 40	V
I_O	Output Current	50	mA
I_C	Collector Current	100	mA
P_c	Power Dissipation	150	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	℃

General purpose transistor UMD3N

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(off)}$	V_{CC}=5V,I_O=100μA	-	-	0.5	V
Input Voltage	$V_{I(on)}$	V_O=0.3V,I_O=10mA	3	-	-	V
Output Voltage	$V_{O(on)}$	I_o=10mA,,0.5mA,	-	0.1	0.3	V
Input Current	I_I	V_I=-5V	-	-	0.88	mA
Output Current	$I_{O(off)}$	V_{CC}=50V, V_I=0V	-	-	0.5	uA
DC Current Gain	G_I	V_O=5V, I_O=5mA	30	-	-	-
Input Resistor	$R_1(R_2)$	-	7	10	13	kΩ
Resistance Ratio	R_2/R_1	-	0.8	1	1.2	-
Gain-Bandwidth Product	f_T	V_{CE}=10V,I_E=-5mA, f=100MHz	-	250	-	MHz

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

DTr1 (NPN)

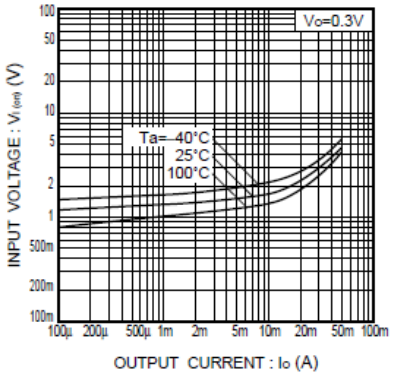


Fig.1 Input voltage vs. output current (ON characteristics)

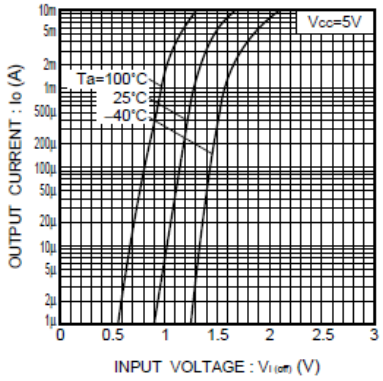


Fig.2 Output current vs. input voltage (OFF characteristics)

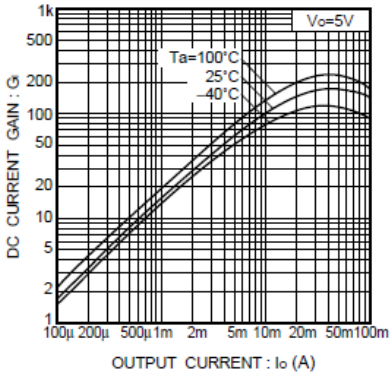


Fig.3 DC current gain vs. output current

General purpose transistor UMD3N

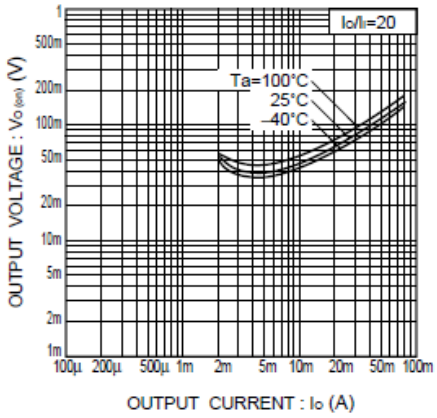


Fig.4 Output voltage vs. output current

DTr2 (PNP)

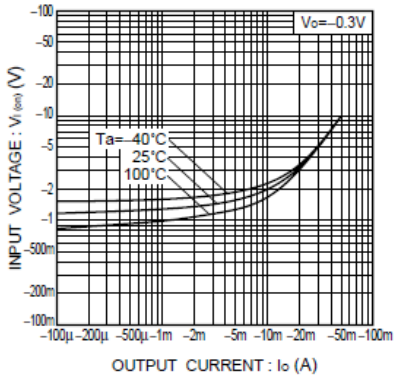


Fig.5 Input voltage vs. output current (ON characteristics)

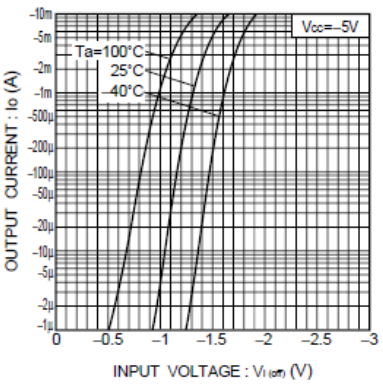


Fig.6 Output current vs. input voltage (OFF characteristics)

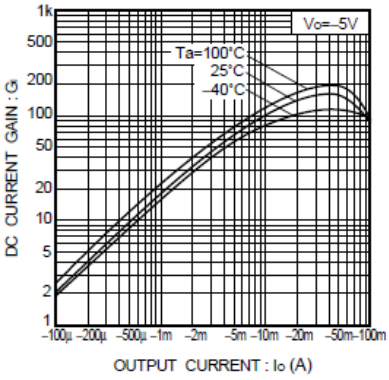


Fig.7 DC current gain vs. output current

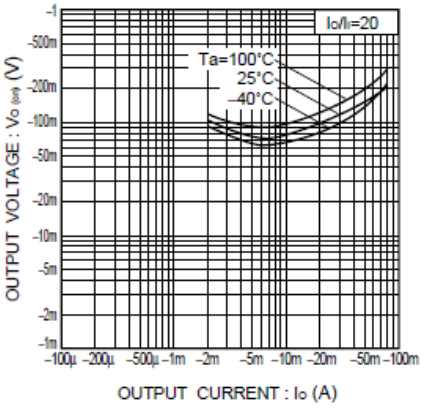
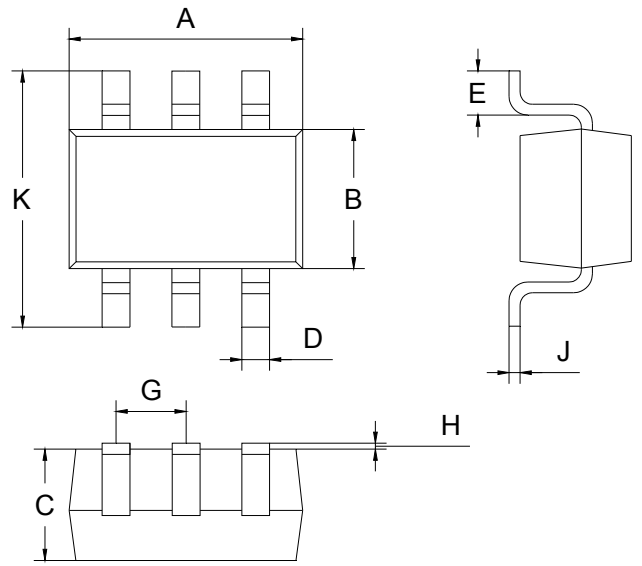


Fig.8 Output voltage vs. output current

General purpose transistor UMD3N

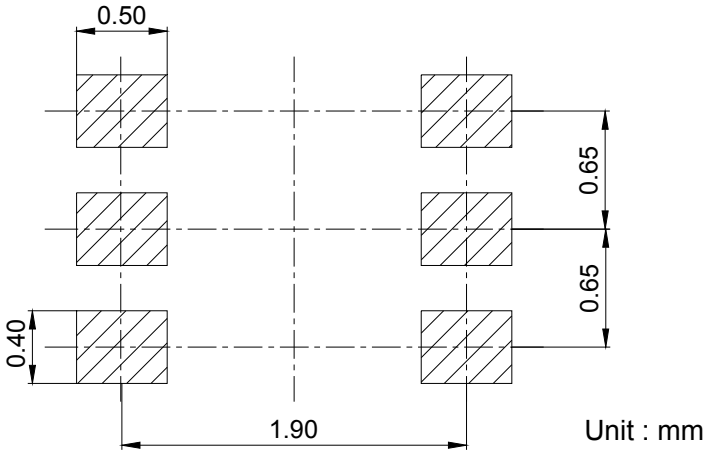
PACKAGE OUTLINE

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
UMD3N	SOT-363	3000/Tape&Reel