PART OBSOLETE – USE DMMT5401

IMT4

DUAL PNP SMALL SIGNAL SURFACE MOUNT TRANSISTOR

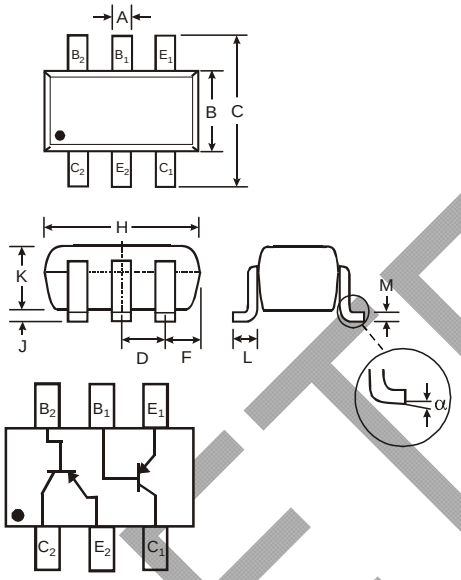
Lead-free Green

Features

- Epitaxial Planar Die Construction
- Complementary NPN Type Available (IMX8)
- Small Surface Mount Package
- **Lead Free/RoHS Compliant (Note 3)**
- **"Green" Device, Note 4 and 5**

Mechanical Data

- Case: SOT-26
- Case Material: Molded Plastic, "Green" Molding Compound, Note 5. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: See Diagram
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Copper leadframe).
- Marking Information: KX7 - See Page 3
- Ordering & Date Code Information: See Page 3
- Weight: 0.016 grams (approximate)



SOT-26			
Dim	**Min**	**Max**	**Typ**
A	0.35	0.50	0.38
B	1.50	1.70	1.60
C	2.70	3.00	2.80
D	—	—	0.95
F	—	—	0.55
H	2.90	3.10	3.00
J	0.013	0.10	0.05
K	1.00	1.30	1.10
L	0.35	0.55	0.40
M	0.10	0.20	0.15
α	0°	8°	—
All Dimensions in mm			

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-120	V
Collector-Emitter Voltage	V_{CEO}	-120	V
Emitter-Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-50	mA
Power Dissipation (Note 1)	P_d	225	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	555	°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 2)						
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-120	—	—	V	I_C = -50μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-120	—	—	V	I_C = -1.0mA
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5.0	—	—	V	I_E = -50μA
Collector Cutoff Current	I_{CBO}	—	—	-0.5	μA	V_{CB} = -100V
Emitter Cutoff Current	I_{EBO}	—	—	-0.5	μA	V_{EB} = -4.0V
ON CHARACTERISTICS (Note 2)						
DC Current Gain	h_{FE}	180	—	820	—	I_C = -2.0mA, V_{CE} = -6.0V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	—	—	-0.5	V	I_C = -10mA, I_B = -1.0mA
SMALL SIGNAL CHARACTERISTICS						
Current Gain-Bandwidth Product	f_T	—	140	—	MHz	V_{CE} = -12V, I_C = -2.0mA, f = 100MHz

Notes:
1. Device mounted on FR-5 PCB 1.0 x 0.75 x 0.062 inch pad layout as shown on Diodes Inc. suggested pad layout AP02001, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf. 200mW per element must not be exceeded.
2. Short duration pulse test used to minimize self-heating effect.
3. No purposefully added lead.
4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
5. Product manufactured with Date Code 0627 (week 27, 2006) and newer are built with Green Molding Compound. Product manufactured prior to Date Code 0627 are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.

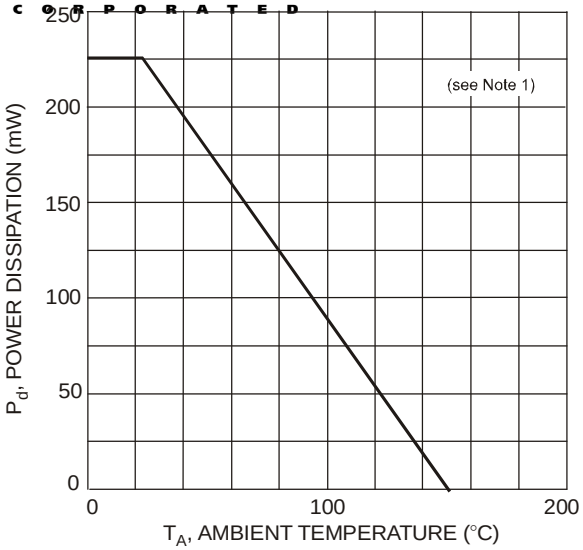


Fig. 1, Power Derating Curve

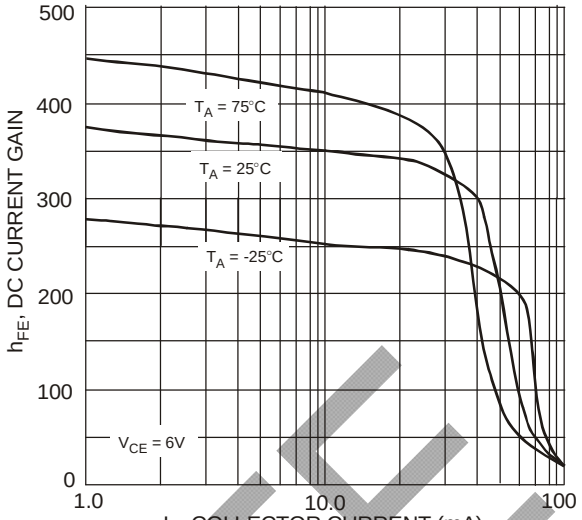


Fig. 2 Typical DC Current Gain vs. Collector Current

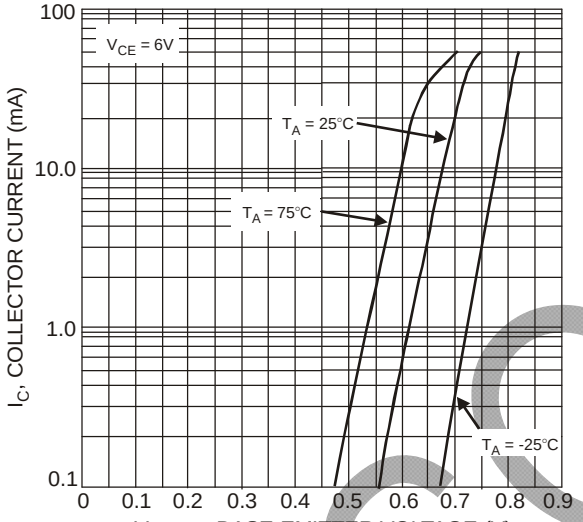


Fig. 3 Typical Collector Current vs. Base-Emitter Voltage

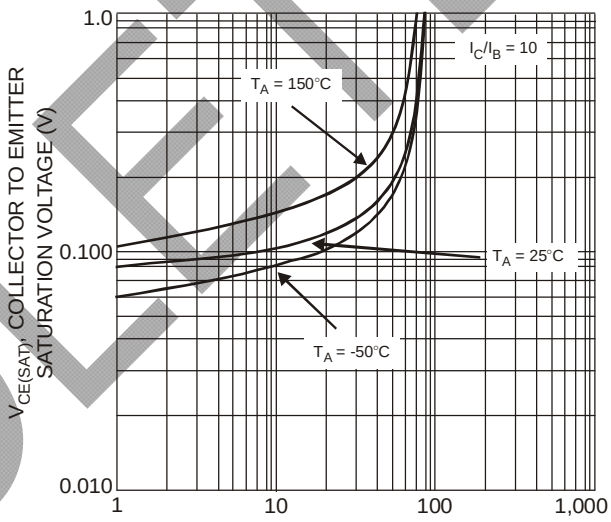


Fig. 4 Typical Collector-Emitter Voltage vs. Collector Current

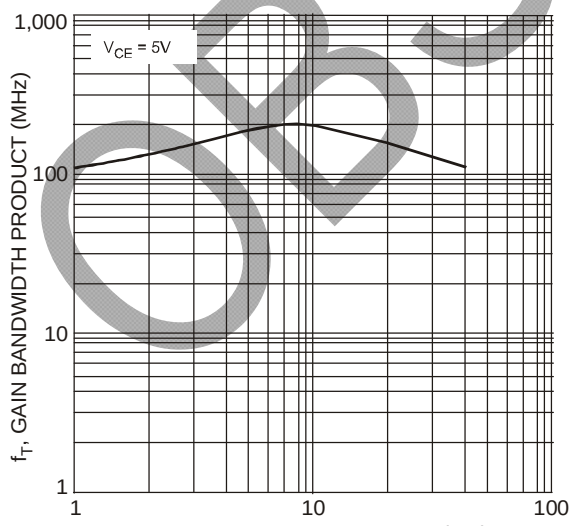


Fig. 5 Typical Gain Bandwidth Product vs. Collector Current

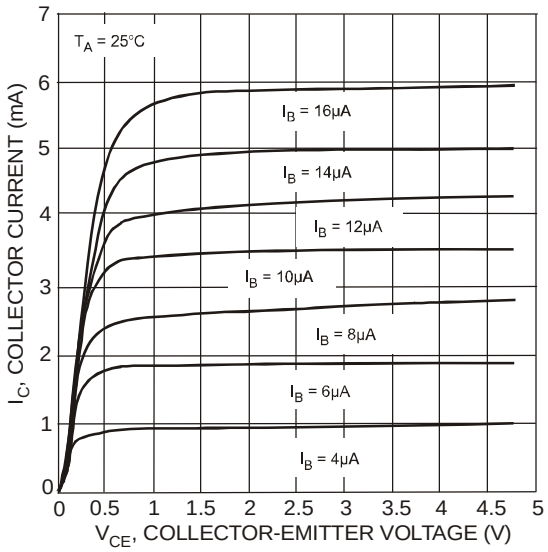


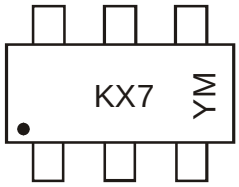
Fig. 6 Typical Collector Current vs. Collector-Emitter Voltage

Ordering Information (Note 5 & 6)

Device	Packaging	Shipping
IMT4-7-F	SOT-26	3000/Tape & Reel

Notes: 6. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



KX7 = Product Type Marking Code
YM = Date Code Marking
Y =Year ex: T = 2006
M = Month ex: 9 = September
YM = Date Code Marking

Date Code Key

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	N	P	R	S	T	U	V	W	X	Y	Z

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D