





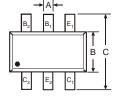
DUAL NPN SMALL SIGNAL SURFACE MOUNT TRANSISTOR

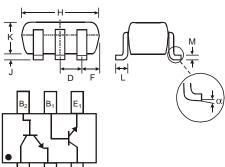
Features

- Epitaxial Planar Die Construction
- Complementary PNP Type Available (IMT4)
- 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: KX8, See Page 3
- Ordering & Date Code Information: See Page 3
- Weight: 0.016 grams (approximate)





	SOT-26										
Dim	Min	Max	Тур								
Α	0.35	0.50	0.38								
В	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								
7	0.013	0.10	0.05								
K	1.00	1.30	1.10								
L	0.35	0.55	0.40								
М	0.10	0.20	0.15								
α	0°	8°									
All [Dimens	ions 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	300	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{ heta JA}$	417	°C/W
Operating and Storage Temperature Range	T _i , T _{STG}	-55 to +150	°C

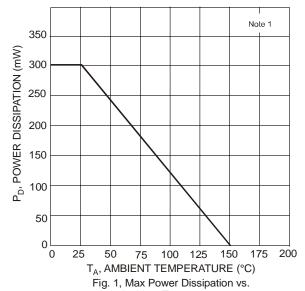
Electrical Characteristics @TA = 25°C unless otherwise specified

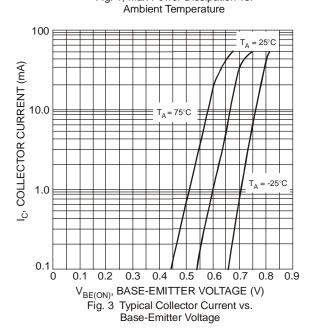
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 2)						
Collector-Base Breakdown Voltage	V _{(BR)CBO}	120	_		V	$I_C = 50\mu A$
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	120	_	_	V	I _C = 1.0mA
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5.0	_	_	V	I _E = 50μA
Collector Cutoff Current	I _{CBO}	_	_	0.5	μΑ	V _{CB} = 100V
Emitter Cutoff Current	I _{EBO}	_	_	0.5	μΑ	$V_{EB} = 4.0V$
ON CHARACTERISTICS (Note 2)					•	
DC Current Gain	h _{FE}	180	_	820	_	$I_C = 2.0 \text{mA}, V_{CE} = 6.0 \text{V}$
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	_	_	0.5	V	$I_C = 10 \text{mA}, I_B = 1.0 \text{mA}$
SMALL SIGNAL CHARACTERISTICS						
Current Gain-Bandwidth Product	f _T	_	140	_	MHz	$V_{CE} = 12V, I_{C} = 2.0 \text{mA},$ f = 100MHz

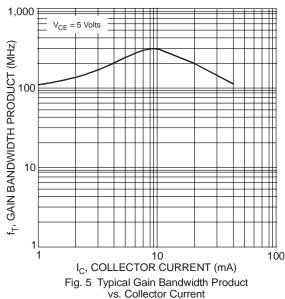
Notes:

- 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.









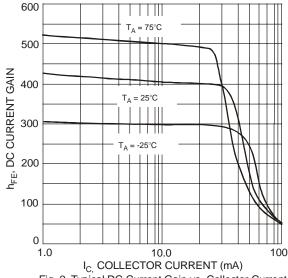
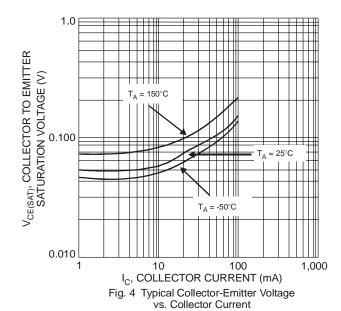


Fig. 2 Typical DC Current Gain vs. Collector Current



6 I_B = 16μΑ COLLECTOR CURRENT (mA) $I_B = 14\mu A$ I_B = 12μA $I_B = 10\mu A$ 3 $I_B = 8\mu A$ 2 $I_B = 6\mu A$ ن_ $I_B = 4\mu A$ 0 2.5 3.5 2 3 1.5 0 V_{CE} , COLLECTOR-EMITTER VOLTAGE (V) Fig. 6 Typical Collector Current vs. Collector-Emitter Voltage

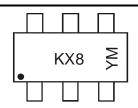


Ordering Information (Note 5 & 6)

Device	Packaging	Shipping
IMX8-7-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



KX8 = Product Type Marking Code YM = Date Code Marking Y = Year ex: T = 2006 M = Month ex: 9 = September

Date Code Key

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	N	Р	R	S	Т	U	V	W	Χ	Υ	Z

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	N	D

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