

IMZ2A

COMPLEMENTARY DUAL GENERAL PURPOSE AMPLIFIER TRANSIS

VOLTAGE 50 Volt **POWER** 300mW

SOT-23 6L

Unit : inch(mm)

FEATURES

- PNP/ NPN epitaxial silicon, planar design
- Collector-emitter voltage $V_{CE}=50V$
- Collector current $I_C=150mA$
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case : SOT-23 6L plastic
- Terminals : Solderable per MIL-STD-750,Method 2026
- Approx. Weight : 0.0005 ounces, 0.014 grams
- Marking : Z2A

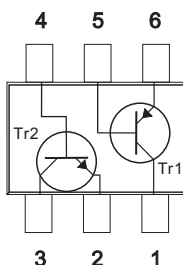
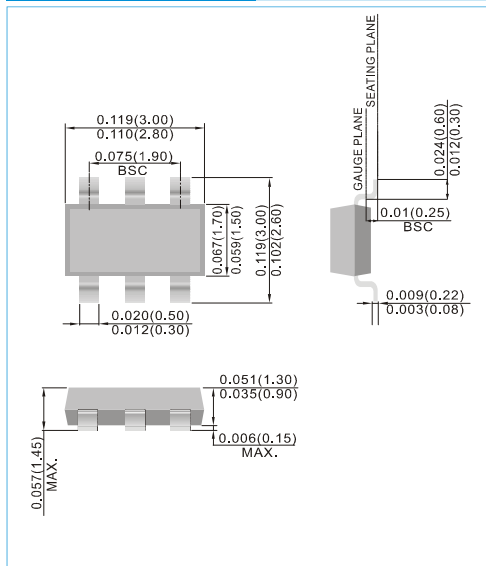


Fig.137



ABSOLUTE RATINGS ($T_A=25^{\circ}C$)

PARAMETER	SYMBOL	Tr1	Tr2	UNITS
Collector-Emitter Voltage	V_{CEO}	-50	50	V
Collector-Base Voltage	V_{CBO}	-60	60	V
Emitter-Base Voltage	V_{EBO}	-6	7	V
Collector Current Continuous	I_C	-150	150	mA

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNITS
Max. Power Dissipation (Note1)	P_{TOT}	300	mW
Thermal Resistance, Junction to Ambient (Note1)	$R_{\theta JA}$	106	$^{\circ}C/W$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^{\circ}C$

NOTE :

1. Transistor mounted on FR-4 board 70 x 60 x 1 mm.

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ELECTRICAL CHARACTERISTICS (T_A=25°C)

Tr1 (PNP)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =-1mA	-50	-	-	V
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =-50μA	-60	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =-50μA	-6	-	-	V
Collector-Base Cutoff Current	I _{CBO}	V _{CB} =-60V	-	-	-0.1	μA
Collector-Emitter Cutoff Current	I _{EBO}	V _{EB} =-6V	-	-	-0.1	μA
DC Current Gain (Note1)	h _{FE}	V _{CE} =-6V, I _C =-1mA	120	-	560	-
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C /I _B =-50mA/-5mA	-	-	-0.5	V
Cutoff Frequency	f _r	I _E =2mA, V _{CE} =-12V, f=100MHz	-	140	-	MHz
Output Capacitance	C _{ob}	I _E =0mA, V _{CE} =-12V, f=100MHz	-	4	5	pF

Tr2 (NPN)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =1mA	50	-	-	V
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =50μA	60	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =50μA	7	-	-	V
Collector-Base Cutoff Current	I _{CBO}	V _{CB} =60V	-	-	0.1	μA
Collector-Emitter Cutoff Current	I _{EBO}	V _{EB} =7V	-	-	0.1	μA
DC Current Gain (Note1)	h _{FE}	V _{CE} =6V, I _C =1mA	120	-	560	-
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C /I _B =50mA/5mA	-	-	0.4	V
Cutoff Frequency	f _r	I _E =2mA, V _{CE} =12V, f=100MHz	-	180	-	MHz
Output Capacitance	C _{ob}	I _E =0mA, V _{CE} =12V, f=100MHz	-	2	3.5	pF

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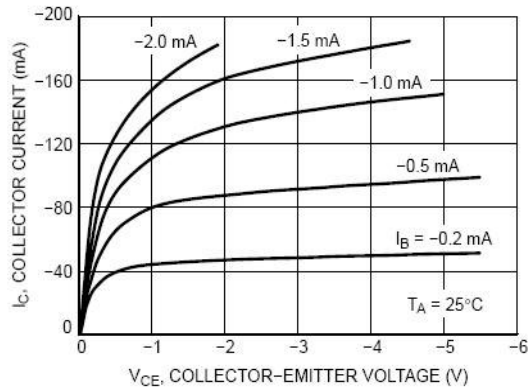


Fig. 1. Collector Saturation Region

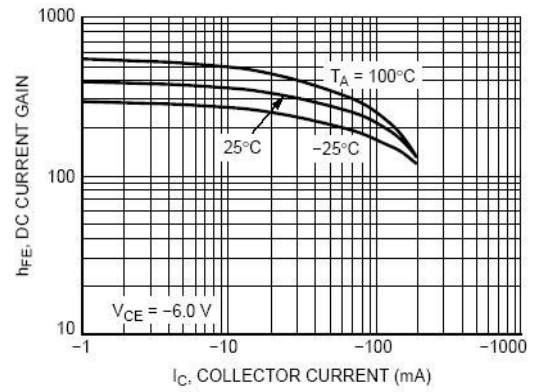


Fig. 2. DC Current Gain

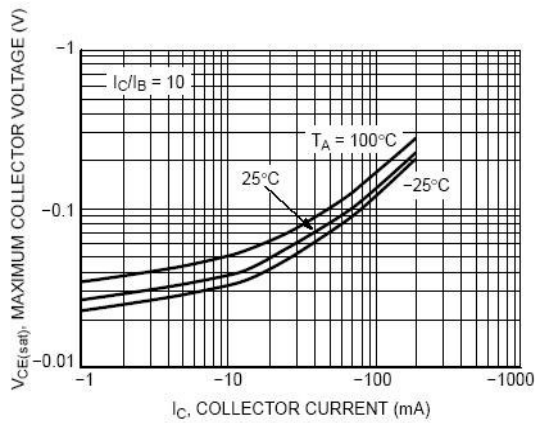


Fig. 3. $V_{CE(sat)}$ versus I_C

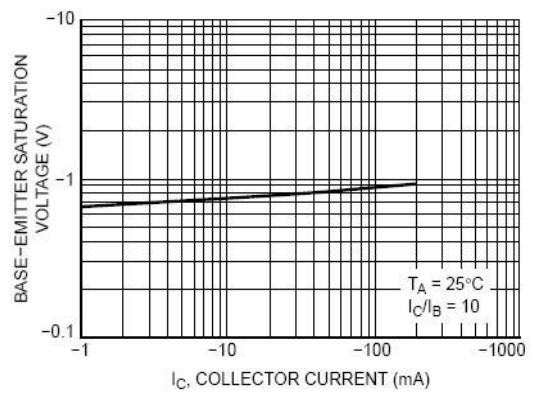


Fig. 4. $V_{BE(sat)}$ versus I_C

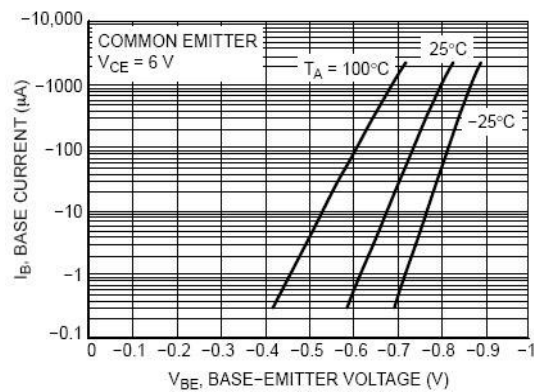


Fig. 5. Base-Emitter Voltage

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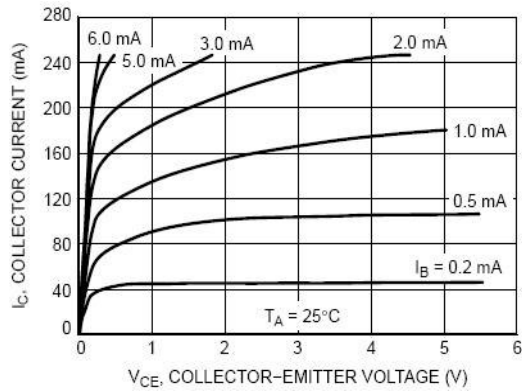


Fig. 1. Collector Saturation Region

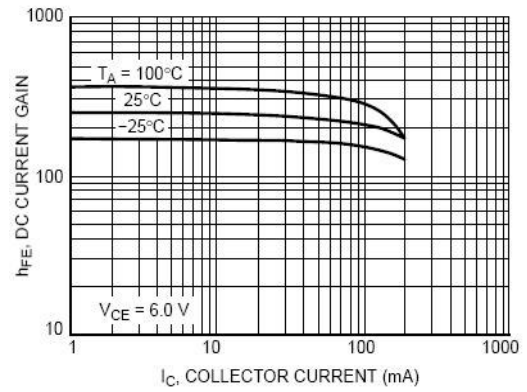


Fig. 2. DC Current Gain

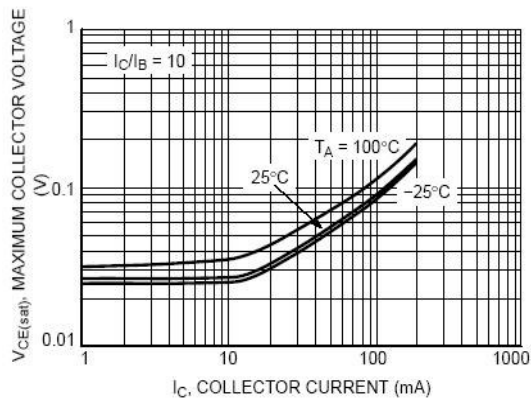


Fig. 3. $V_{CE(sat)}$ versus I_C

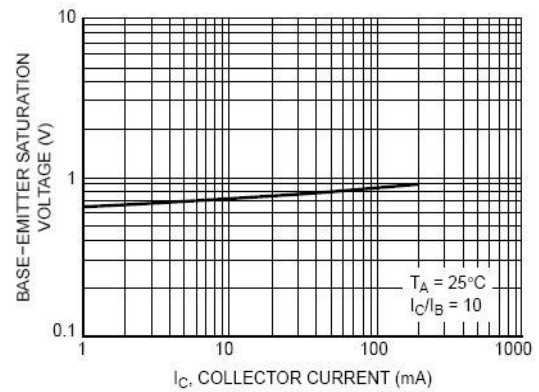


Fig. 4. $V_{BE(sat)}$ versus I_C

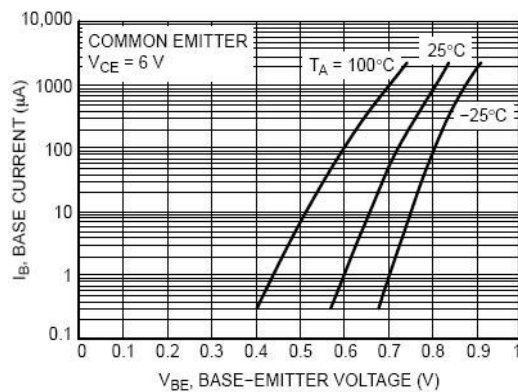
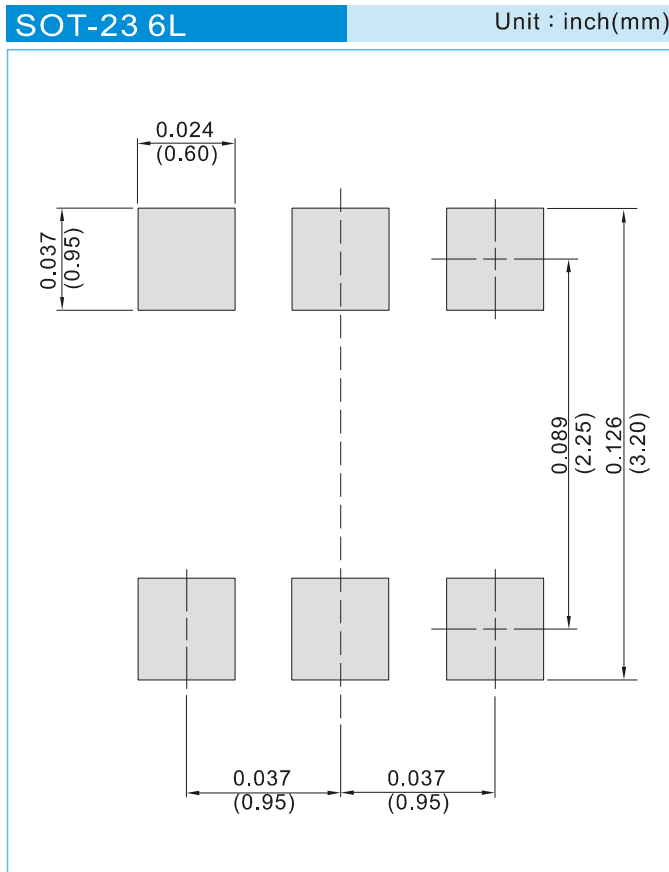


Fig. 5. Base-Emitter Voltage

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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 10K per 13" plastic Reel
T/R - 3K per 7" plastic Reel

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Part No_packing code_Version

IMZ2A_R1_00001

IMZ2A_R2_00001

IMZ2A_S1_00001

IMZ2A_S2_00001

For example :

RB500V-40_R2_00001

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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