

# UTC IMZ88

# DUAL TRANSISTOR

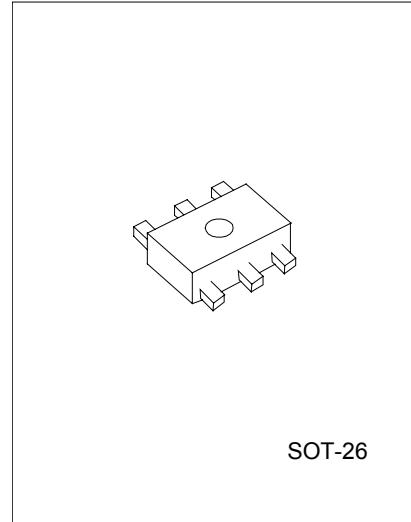
## GENERAL PURPOSE DUAL TRANSISTOR

### FEATURES

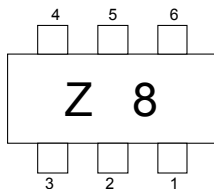
\*Both a 8550S chip and 8050S chip in a SMT package

### APPLICATIONS

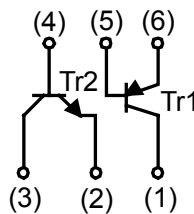
\*Class B push-pull audio amplifier  
\*General purpose applications



### MARKING



### EQUIVALENT CIRCUITS



PIN 1 : Collector (1)    PIN 4: Base (2)  
 PIN 2: Emitter (2)    PIN 5: Base (1)  
 PIN 3: Collector (2)    PIN 6: Emitter (1)

### ABSOLUTE MAXIMUM RATINGS ( Ta=25°C , unless otherwise specified )

PARAMETER	SYMBOL	RATING		UNIT
		Tr1	Tr2	
Collector-Base Voltage	V <sub>CB0</sub>	-30	30	V
Collector-Emitter Voltage	V <sub>CE0</sub>	-20	20	V
Emitter-Base Voltage	V <sub>EB0</sub>	-5	5	V
Collector Current	I <sub>c</sub>	-700	700	mA
Collector Dissipation	P <sub>c</sub>	300		mW
Junction Temperature	T <sub>j</sub>	150		°C
Storage Temperature	T <sub>STG</sub>	-65 ~ +150		°C

### ELECTRICAL CHARACTERISTICS ( Ta=25°C, unless otherwise specified)

Tr1						
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BV <sub>CB0</sub>	I <sub>c</sub> =-100μA, I <sub>E</sub> =0	-30			V
Collector-emitter breakdown voltage	BV <sub>CE0</sub>	I <sub>c</sub> =-1mA, I <sub>B</sub> =0	-20			V
Emitter-base breakdown voltage	BV <sub>EB0</sub>	I <sub>E</sub> =-100μA, I <sub>c</sub> =0	-5			V
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> =-30V, I <sub>E</sub> =0			-1	μA
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> =-5V, I <sub>c</sub> =0			-100	nA
DC current gain	hFE1	V <sub>CE</sub> =-1V, I <sub>c</sub> =-1mA	100			
	hFE2	V <sub>CE</sub> =-1V, I <sub>c</sub> =-150mA	120	110	400	

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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
	hFE3	VCE=-1V, Ic=-500mA	40			
Collector-emitter saturation voltage	VCE(sat)	Ic=-500mA, IB=-50mA			-0.5	V
Base-emitter saturation voltage	VBE(sat)	Ic=500mA, IB=-50mA			-1.2	V
Base-emitter saturation voltage	VBE	VCE=-1V, Ic=-10mA			-1.0	V
Current gain bandwidth product	fT	VCE=-10V, Ic=-50mA	100			MHz
Output capacitance	Cob	VCB=10V, IE=0, f=1MHz		9.0		pF

Tr2

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BVCBO	Ic=100μA, IE=0	30			V
Collector-Emitter Breakdown Voltage	BVCEO	Ic=1mA, IB=0	20			V
Emitter-Base Breakdown Voltage	BVEBO	IE=100μA, Ic=0	5			V
Collector Cut-Off Current	ICBO	VCB=30V, IE=0			1	μA
Emitter Cut-Off Current	IEBO	VEB=5V, Ic=0			100	nA
DC Current Gain	hFE1	VCE=1V, Ic=1mA	100			
	hFE2	VCE=1V, Ic=150mA	120	110	400	
	hFE3	VCE=1V, Ic=500mA	40			
Collector-Emitter Saturation Voltage	VCE(sat)	Ic=500mA, IB=50mA			0.5	V
Base-Emitter Saturation Voltage	VBE(sat)	Ic=500mA, IB=50mA			1.2	V
Base-Emitter Saturation Voltage	VBE	VCE=1V, Ic=10mA			1.0	V
Current Gain Bandwidth Product	fT	VCE=10V, Ic=50mA	100			MHz
Output Capacitance	Cob	VCB=10V, IE=0, f=1MHz		9.0		pF

## CLASSIFICATION OF hFE2

RANK	C	D	E
RANGE	120-200	160-300	280-400

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