



# 2SC 945

NPN SILICON PLANAR EPITAXIAL TRANSISTOR

MICRO ELECTRONICS

2SC 945 IS AN NPN SILICON PLANAR EPITAXIAL TRANSISTOR DESIGNED FOR AUDIO FREQUENCY AMPLIFIER. IT IS COMPLEMENTARY TO THE PNP TYPE 2SA733.

CASE TO-92B



ECB

### ABSOLUTE MAXIMUM RATINGS

Collector-Base Voltage	VCBO	60V
Collector-Emitter Voltage	VCEO	50V
Emitter-Base Voltage	VEBO	5V
Collector Current	IC(DC)	100mA
Collector Current	IC(PULSE)*	200mA
Base Current	IB(DC)	20mA
Base Current	IB(PULSE) *	40mA
Total Power Dissipation @ TA=25°C	Ptot	250mW
Operating Junction & Storage Temperature	Tj, Tstg	-55 to +125°C

### ELECTRICAL CHARACTERISTICS @ TA=25°C

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
Collector Cutoff Current	ICBO		100	nA	VCB=60V IE=0
Collector Cutoff Current	ICEO		1	µA	VCE=40V IB=0
Emitter Cutoff Current	IEBO		100	nA	VEB=5V IC=0
Collector-Emitter Saturation Voltage	VCE(SAT)		0.3	V	IC=100mA IB=10mA
Base-Emitter Saturation Voltage	VBE(SAT)		1	V	IC=100mA IB=10mA
Base-Emitter Voltage	VBE	0.55	0.65	V	IC=1mA VCE=6V
D.C. Current Gain	HFE1 *	50			IC=0.1mA VCE=6V
D.C. Current Gain	HFE2 **	90	600		IC=1mA VCE=6V
Current Gain-Bandwidth Product	fT	150	450	MHz	-IE=10mA VCE=6V
Output Capacitance	Cob		5	pF	VCB=6V IE=0 f=1MHz
Noise Figure	NF		15	dB	IC=0.1mA VCE=5V f=1kHz RG=2kΩ

\* Pulse Test : Pulse Width ≤ 10ms, Duty Cycle ≤ 50%

\*\* HFE2 is classified as follows:

GROUP R : 90-180

GROUP Q : 135-270

GROUP P : 200-400

GROUP K : 300-600

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