



UNISONIC TECHNOLOGIES CO., LTD

2SA2016

PNP PLANAR TRANSISTOR

PNP EPITAXIAL PLANAR TRANSISTOR

APPLICATIONS

* Relay drivers, lamp drivers, motor drivers, strobes.

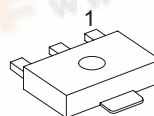
FEATURES

*High current capacitance.

*Low collector-to-emitter saturation voltage.

*High-speed switching

*High allowable power dissipation.



SOT-89

*Pb-free plating product number: 2SA2016L

ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SA2016-AB3-R	2SA2016L-AB3-R	SOT-89	B	C	E	Tape Reel

2SA2016L-AB3-R (1)Packing Type (2)Package Type (3)Lead Plating		(1) R: Tape Reel (2) AB3: SOT-89 (3) L: Lead Free Plating Blank: Pb/Sn
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■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

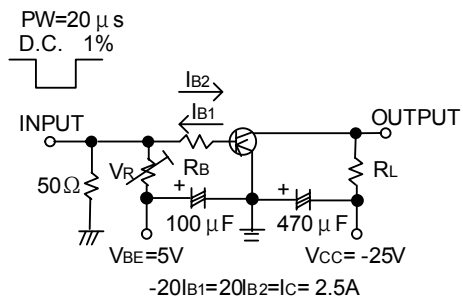
PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Dissipation Mounted on a ceramic board (250mm ² *0.8mm)	Pc	1.3	W
Collector Dissipation (Tc=25°C)	Pc	3.5	W
Collector Current	Ic	-7	A
Collector Current	Icp	-10	A
Base Current	I _B	-1.2	A
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55 to +150	°C

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

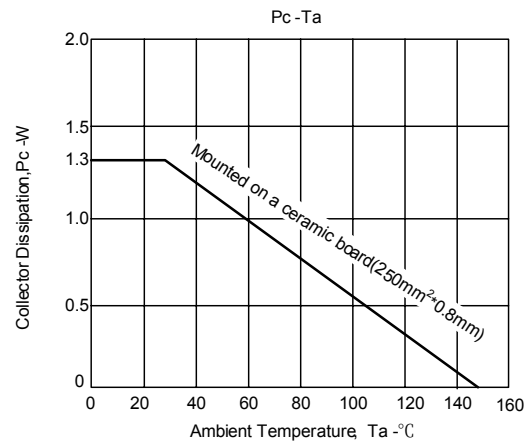
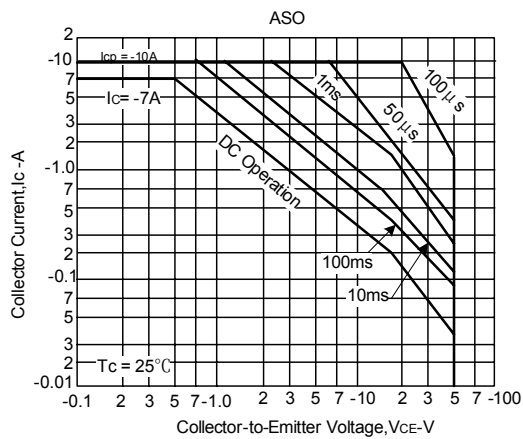
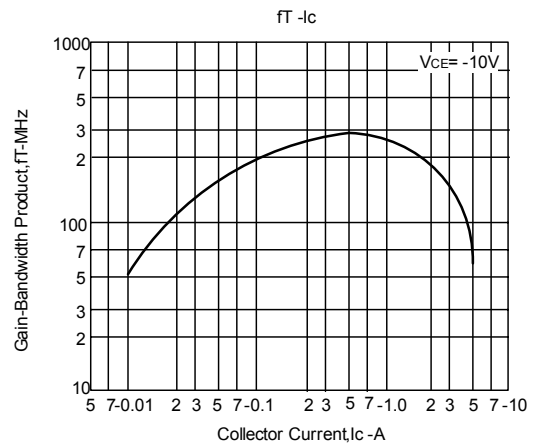
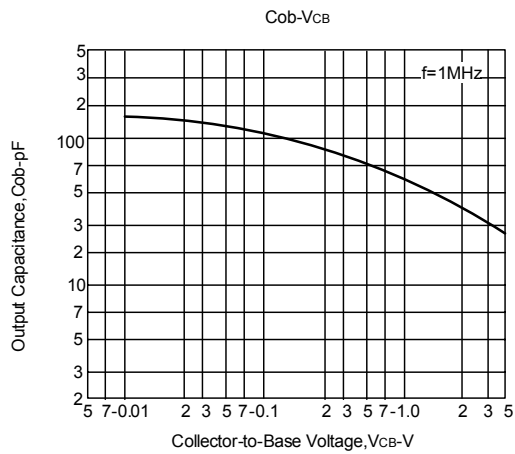
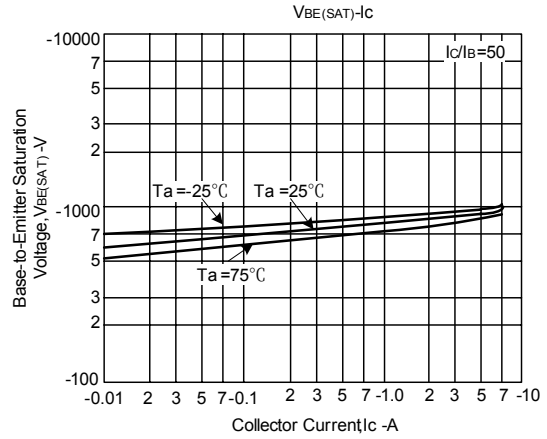
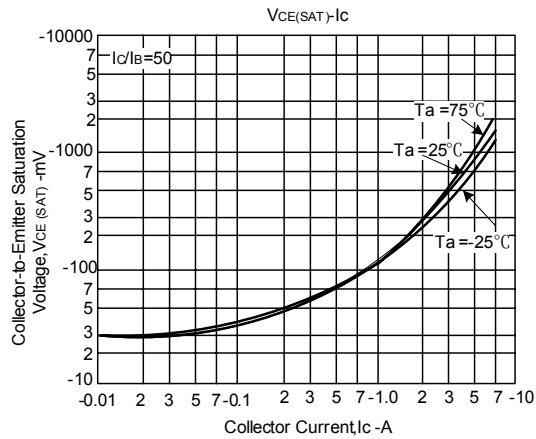
■ ELECTRICAL CHARACTERISTICS (Tc=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-to-Base Breakdown Voltage	BV_{CBO}	Ic= -10μA, I _E =0	-50			V
Collector-to- Emitter Breakdown Voltage	BV_{CEO}	Ic= -1mA, R _{BE} =∞	-50			V
Emitter-to-Base Breakdown Voltage	BV_{EBO}	Ic=0, I _E = -10μA	-6			V
Collector Cut-Off Current	I _{CBO}	V _{CB} = -40V, I _E =0			-0.1	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} = -4V, Ic=0			-0.1	μA
DC Current Gain	h _{FE}	V _{CE} = -2V, Ic= -500mA	200		560	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	Ic= -3.5A, I _B = -175mA		-0.23	-0.39	V
		Ic= -2A, I _B = -40mA		-0.24	-0.40	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	Ic= -2A, I _B = -40mA		-0.83	-1.2	V
Gain Bandwidth Product	f _T	V _{CE} = -10V, Ic= -500mA		290		MHz
Output Capacitance	Cob	V _{CB} = -10V, f=1MHz		50		pF
Turn-on Time	t _{ON}	See specified Test Circuit		40		ns
Storage Time	t _{STG}	See specified Test Circuit		225		ns
Fall Time	t _F	See specified Test Circuit		25		ns

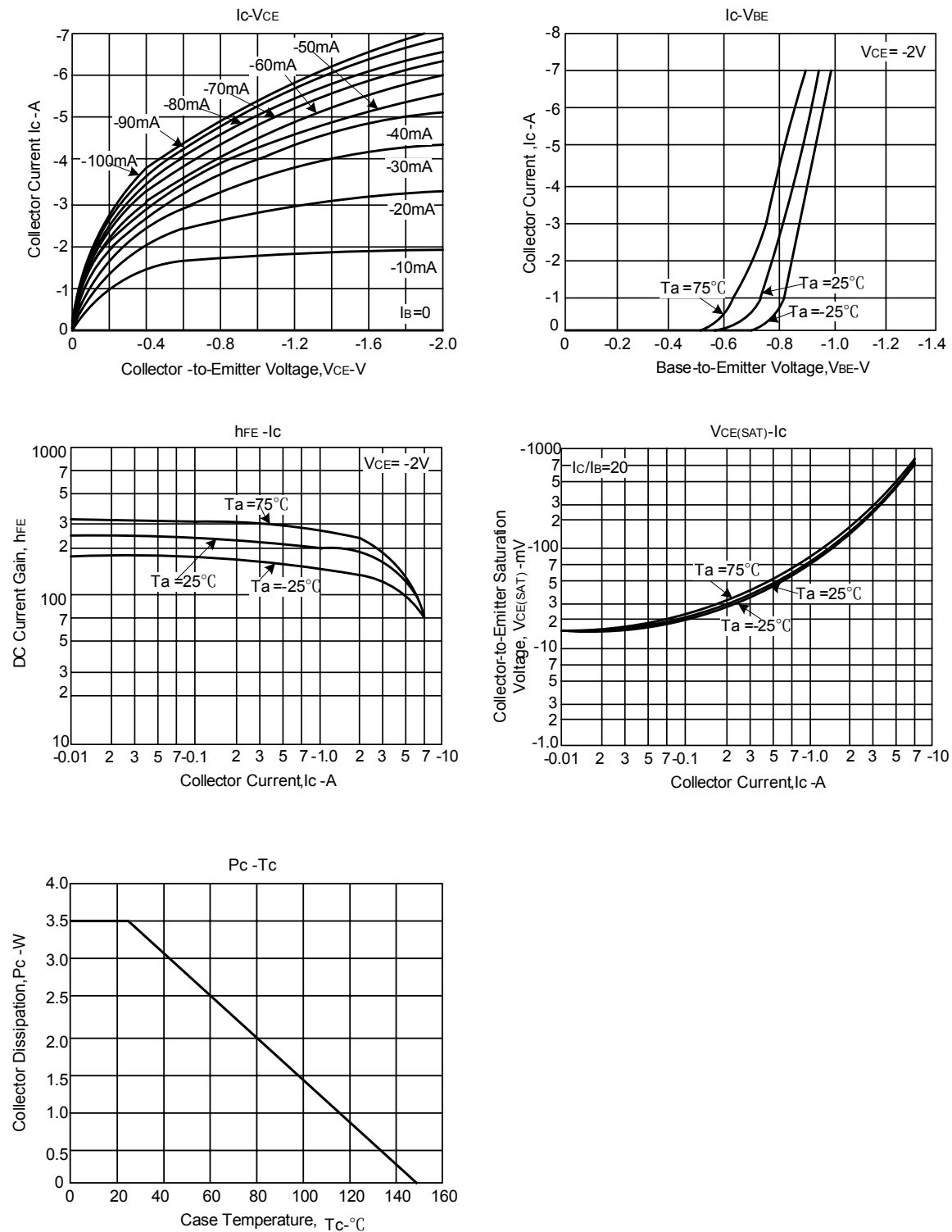
■ SWITCHING TIME TEST CIRCUIT



TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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