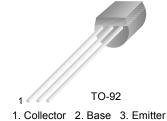


BC546/547/548/549/550

Switching and Applications

- High Voltage: BC546, V_{CEO}=65V
 Low Noise: BC549, BC550
- Complement to BC556 ... BC560



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a =25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage : BC546	80	V
020	: BC547/550	50	V
	: BC548/549	30	V
V _{CEO}	Collector-Emitter Voltage : BC546	65	V
	: BC547/550	45	V
	: BC548/549	30	V
V_{EBO}	Emitter-Base Voltage : BC546/547	6	V
	: BC548/549/550	5	V
I _C	Collector Current (DC)	100	mA
P _C	Collector Power Dissipation	500	mW
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-65 ~ 150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
I _{CBO}	Collector Cut-off Current	V_{CB} =30V, I_{E} =0			15	nA
h _{FE}	DC Current Gain	V _{CE} =5V, I _C =2mA	110		800	
V _{CE} (sat)	Collector-Emitter Saturation Voltage	I _C =10mA, I _B =0.5mA I _C =100mA, I _B =5mA		90 200	250 600	mV mV
V _{BE} (sat)	Base-Emitter Saturation Voltage	I _C =10mA, I _B =0.5mA I _C =100mA, I _B =5mA		700 900		mV mV
V _{BE} (on)	Base-Emitter On Voltage	V _{CE} =5V, I _C =2mA V _{CE} =5V, I _C =10mA	580	660	700 720	mV mV
f _T	Current Gain Bandwidth Product	V _{CE} =5V, I _C =10mA, f=100MHz		300		MHz
C _{ob}	Output Capacitance	V _{CB} =10V, I _E =0, f=1MHz		3.5	6	pF
C _{ib}	Input Capacitance	V _{EB} =0.5V, I _C =0, f=1MHz		9		pF
NF	Noise Figure : BC546/547/548 : BC549/550 : BC549 : BC550	V_{CE} =5V, I_{C} =200 μ A f=1KHz, R_{G} =2K Ω V_{CE} =5V, I_{C} =200 μ A R_{C} =2K Ω . f=30~15000MHz		2 1.2 1.4 1.4	10 4 4 3	dB dB dB dB

h_{FE} Classification

Classification	A	В	С
h _{FE}	110 ~ 220	200 ~ 450	420 ~ 800

Typical Characteristics

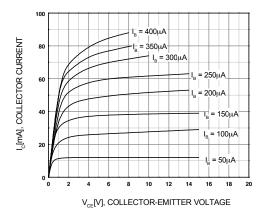


Figure 1. Static Characteristic

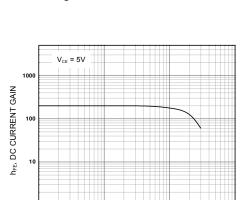


Figure 3. DC current Gain

I_C[mA], COLLECTOR CURRENT

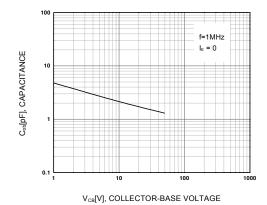


Figure 5. Output Capacitance

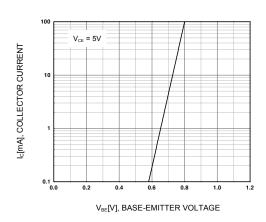


Figure 2. Transfer Characteristic

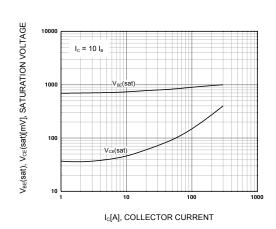


Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

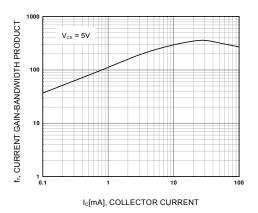
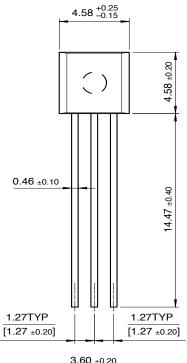


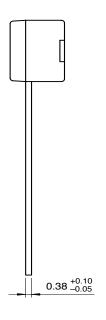
Figure 6. Current Gain Bandwidth Product

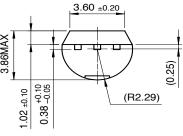
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Package Dimensions

TO-92







Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E ² CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I ² C™	OCX™	RapidConfigure™	UHC™
Across the board	. Around the world.™	OCXPro™	RapidConnect™	UltraFET [®]
The Power Franc	hise™	OPTOLOGIC [®]	SILENT SWITCHER®	VCX™
Programmable A	ctive Droop™	OPTOPLANAR™	SMART START™	

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