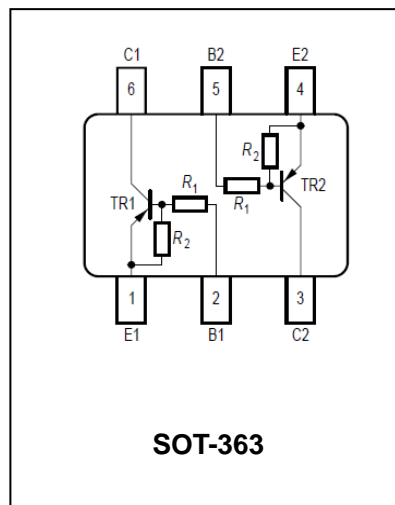


PNP Silicon Digital Transistor

BCR185S

FEATURES

- Switching circuit, inverter, interface circuit, driver circuit.
- Built in bias resistor ($R_1=10k\Omega$, $R_2=47k\Omega$).
- Two internally isolated transistors with good matching in one multichip package.
- For orientation in reel see package information below.
- Qualified according AEC Q101.



ORDERING INFORMATION

Type No.	Marking	Package Code
BCR185S	WNs	SOT-363

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
$V_i(\text{fwd})$	Input forward voltage	-40	V
$V_i(\text{rev})$	Input reverse voltage	-6	V
I_C	Collector current	-100	mA
P_D	Power Dissipation	250	mW
R_{thJS}	Thermal Resistance, Junction - soldering point	140	K/W
T_j, T_{stg}	Junction and Storage Temperature	-65 to +150	$^\circ\text{C}$



PNP Silicon Digital Transistor

BCR185S

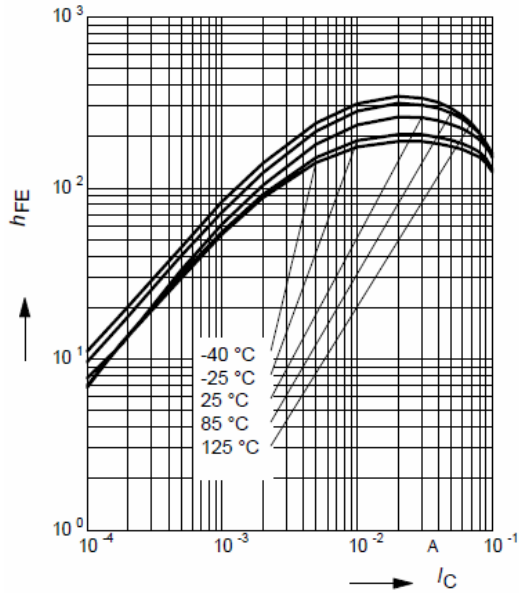
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	-50	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-100\mu A, I_B=0$	-50	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=-40V, I_E=0$	-	-	-100	nA
Emitter-base cutoff current	I_{EBO}	$V_{EB}=-6V, I_E=0$	-	-	-167	uA
DC current gain	h_{FE}	$V_{CE}=-5V, I_C=-5mA$	70	-	-	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-10mA, I_B=-0.5mA$	-	-	-0.3	V
Input off voltage	$V_{i(off)}$	$I_C=-100\mu A, V_{CE}=-5V$	-0.5	-	-1	V
Input on voltage	$V_{i(on)}$	$I_C=-2mA, V_{CE}=-0.3V$	-0.5	-	-1.4	V
Input resistor	R1	-	7	10	13	kΩ
Resistor ratio	R1/R2	-	0.19	0.21	0.24	-
Transition frequency	f_T	$V_{CE}=-5V, I_C=-10mA$ $f=100MHz$	-	200	-	MHz
Collector-base Capacitance	Ccb	$V_{CB}=-10V, f=1.0MHz$	-	3	-	pF

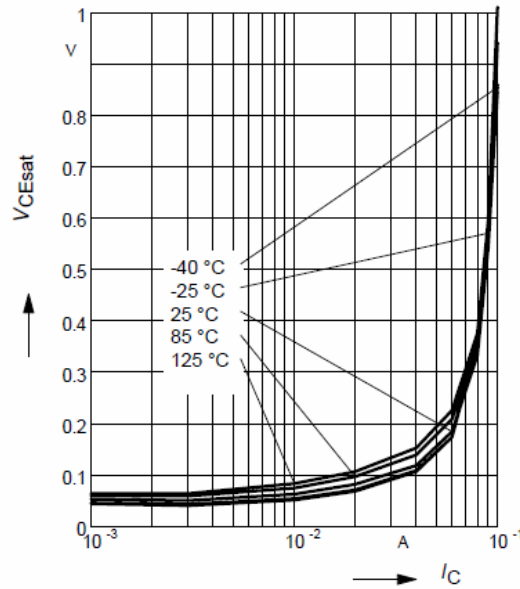
PNP Silicon Digital Transistor

BCR185S

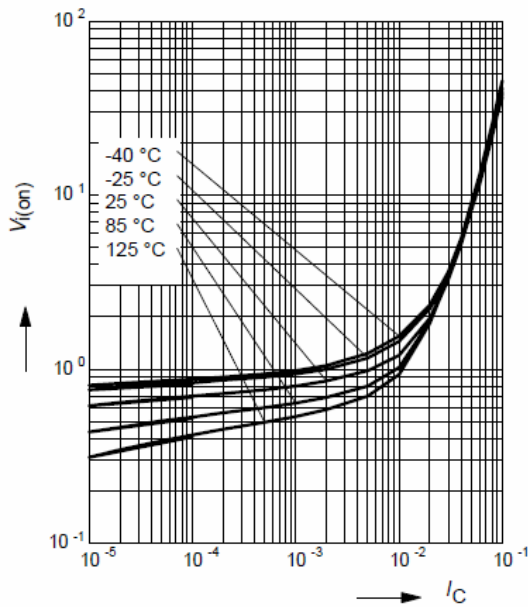
TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



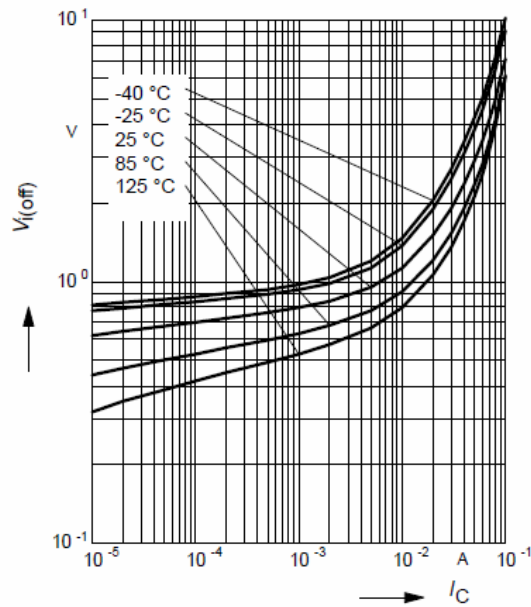
DC current gain $h_{FE} = f(I_C)$
 $V_{CE} = 5\text{ V}$ (common emitter configuration)



Collector-emitter saturation voltage
 $V_{CEsat} = f(I_C), h_{FE} = 20$



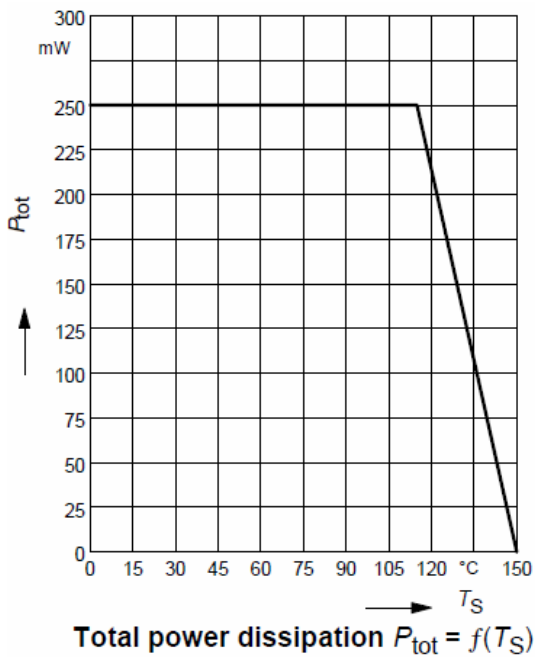
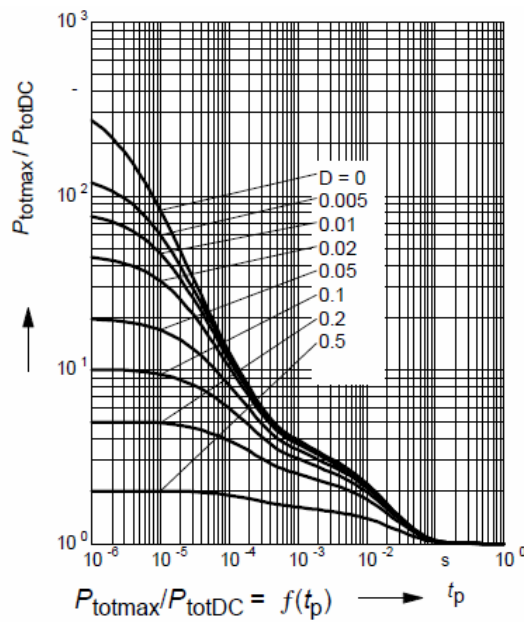
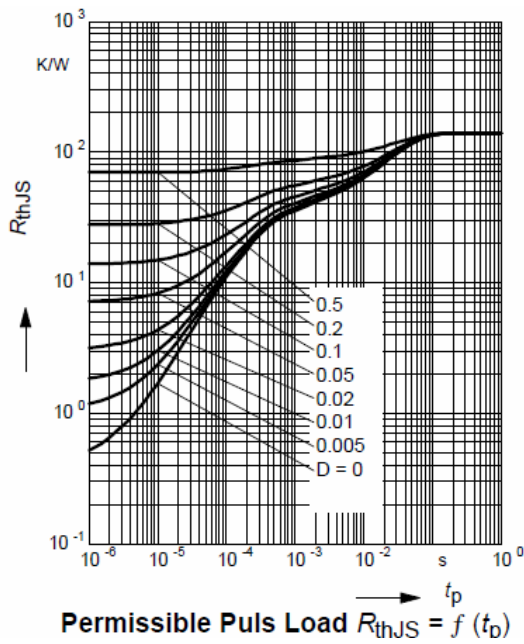
Input on Voltage $V_{i(on)} = f(I_C)$
 $V_{CF} = 0.3\text{ V}$ (common emitter configuration)



Input off voltage $V_{i(off)} = f(I_C)$
 $V_{CE} = 5\text{ V}$ (common emitter configuration)

PNP Silicon Digital Transistor

BCR185S





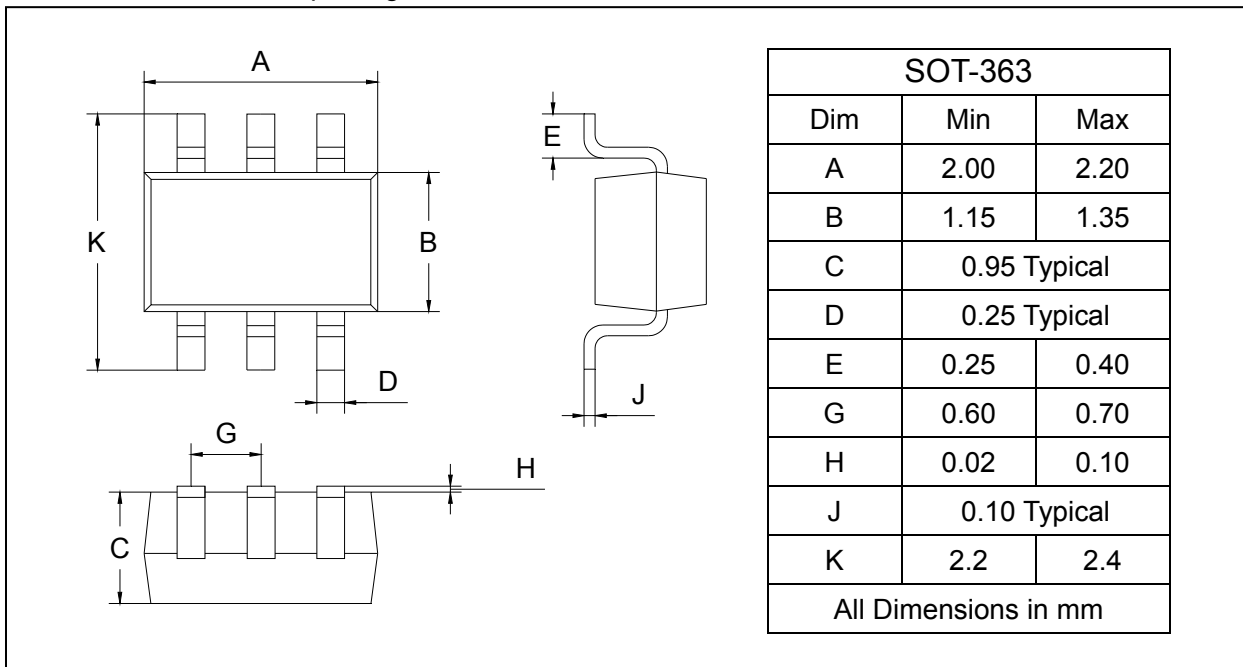
PNP Silicon Digital Transistor

BCR185S

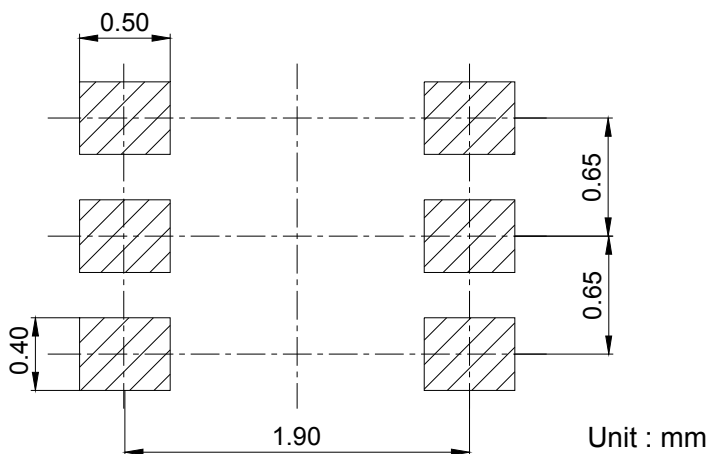
PACKAGE OUTLINE

Plastic surface mounted package

SOT-363



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
BCR185S	SOT-363	3000/Tape&Reel