Ordering number : ENN3485

ON Semiconductor®

ON Semiconductor
DATA SHEET

NPN Epitaxial Planar Silicon Transistors

2SC4694 — Low-Frequency General-Purpose Amplifier, Muting Applications

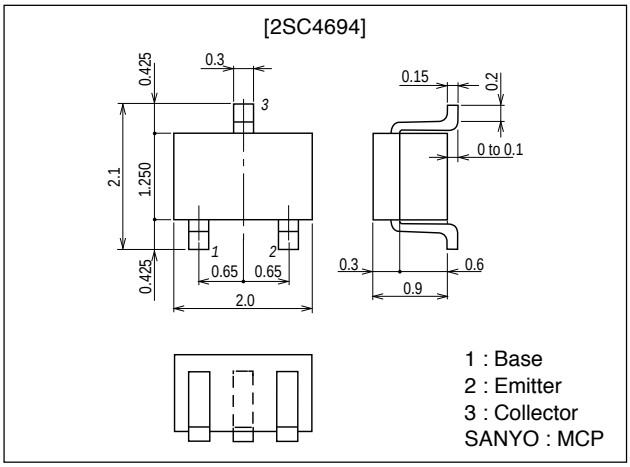
Features

- Adoption of MBIT process.
- High DC current gain.
- High V_{EBO} (V_{EBO}≥25V).
- High reverse h_{FE} (150 typ).
- Small ON resistance [Ron=1Ω (I_B=5mA)].
- Ultrasmall-sized package permitting applied sets to be small and slim.

Package Dimensions

unit:mm

2059B



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		50	V
Collector-to-Emitter Voltage	V_{CEO}		20	V
Emitter-to-Base Voltage	V_{EBO}		25	V
Collector Current	I_C		500	mA
Collector Current (Pulse)	I_{CP}		800	mA
Base Current	I_B		100	mA
Collector Dissipation	P_C		150	mW
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=40V, I_E=0			0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=20V, I_C=0			0.1	μA
DC Current Gain	$h_{FE}1$	V_{CE}=5V, I_C=10mA	300		1200	
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=10mA		250		MHz
Output Capacitance	C_{ob}	V_{CB}=10V, f=1MHz		3.6		pF

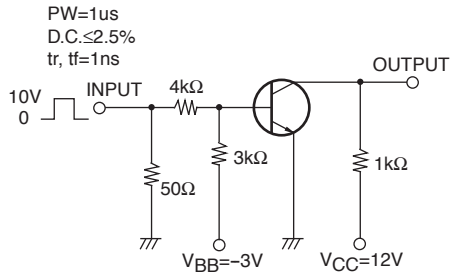
Marking :WT

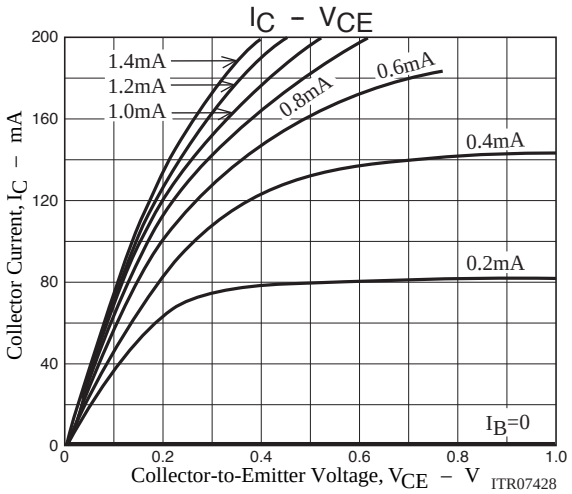
Continued on next page.

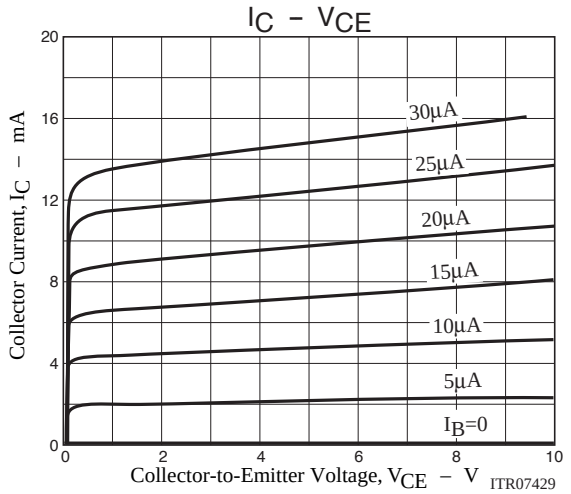
Continued from preceding page.

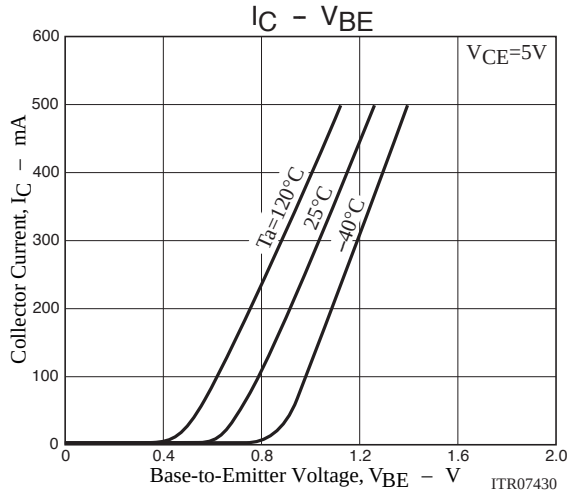
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=100mA, I_B=2mA		0.12	0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=100mA, I_B=2mA		0.85	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	50			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	20			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	25			V
Turn-ON Time	t_{on}	See specified Test Circuit.		135		ns
Storage Time	t_{stg}	See specified Test Circuit.		450		ns
Fall Time	t_f	See specified Test Circuit.		100		ns

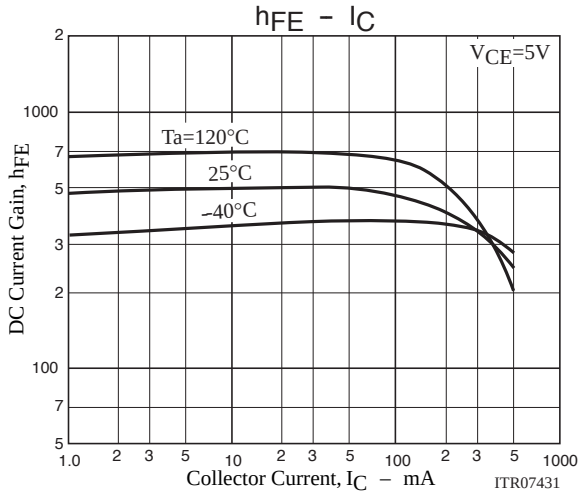
Switching Time Test Circuit

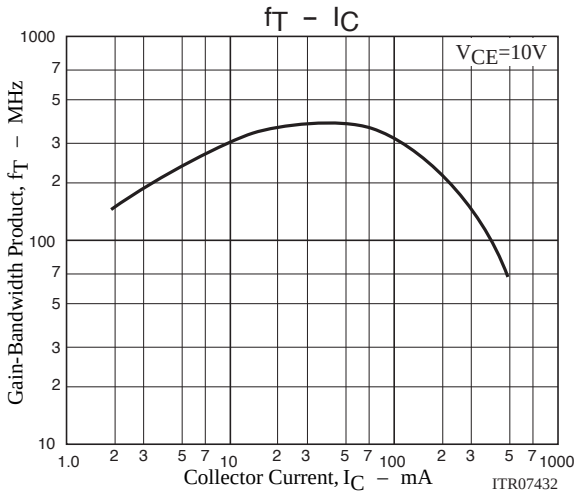


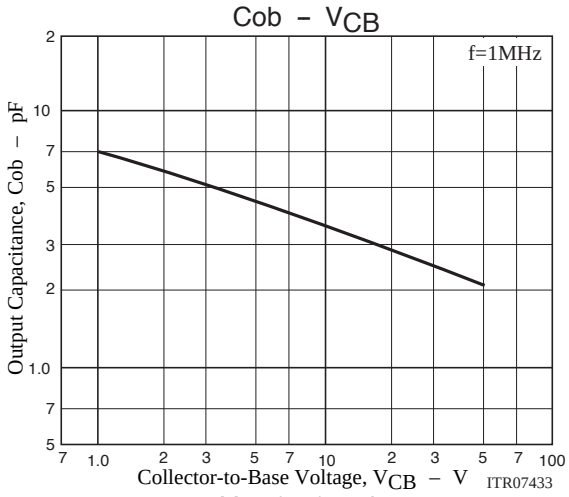


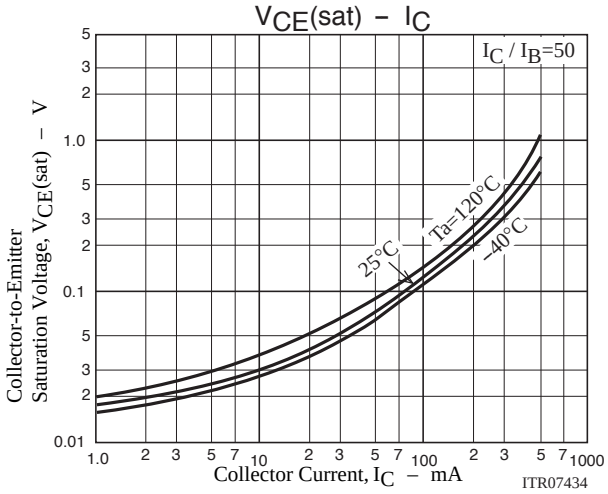


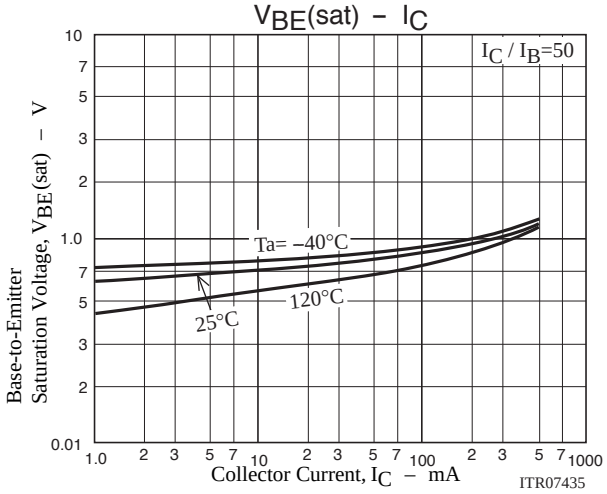


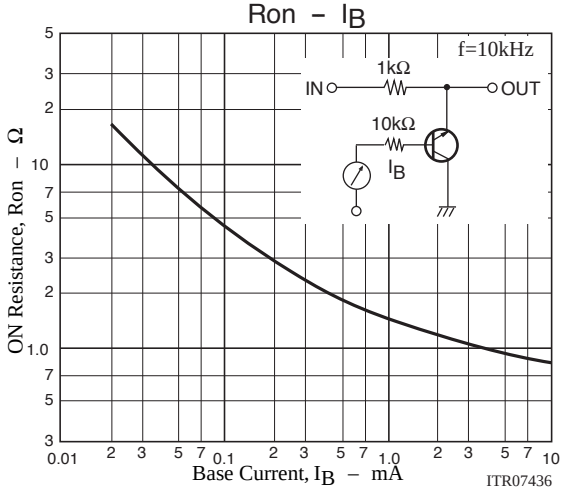


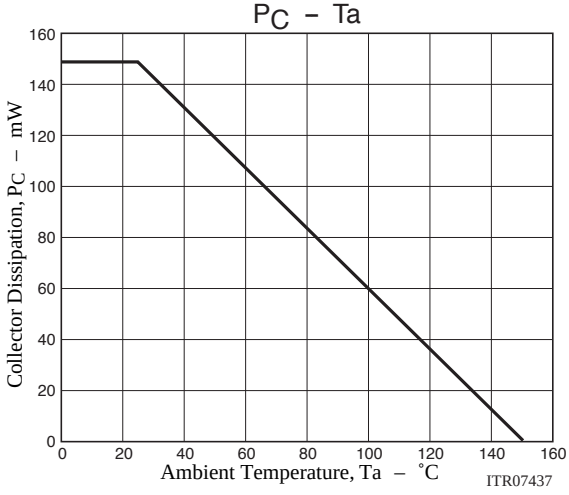












PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
Phone: 303-675-2175 or 800-344-3860 Toll Free USA/Canada
Fax: 303-675-2176 or 800-344-3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800-282-9855 Toll Free USA/Canada.
Europe, Middle East and Africa Technical Support:
Phone: 421 33 790 2910
Japan Customer Focus Center
Phone: 81-3-5773-3850

ON Semiconductor Website:www.onsemi.com

Order Literature: http://www.onsemi.com/orderlit

For additional information, please contact your local Sales Representative

2SC4694/D