Silicon NPN Digital transistor in a SOT-23 Plastic Package.

6

Ã a ? d / Absolute Maximum Ratings(Ta=25 ;)

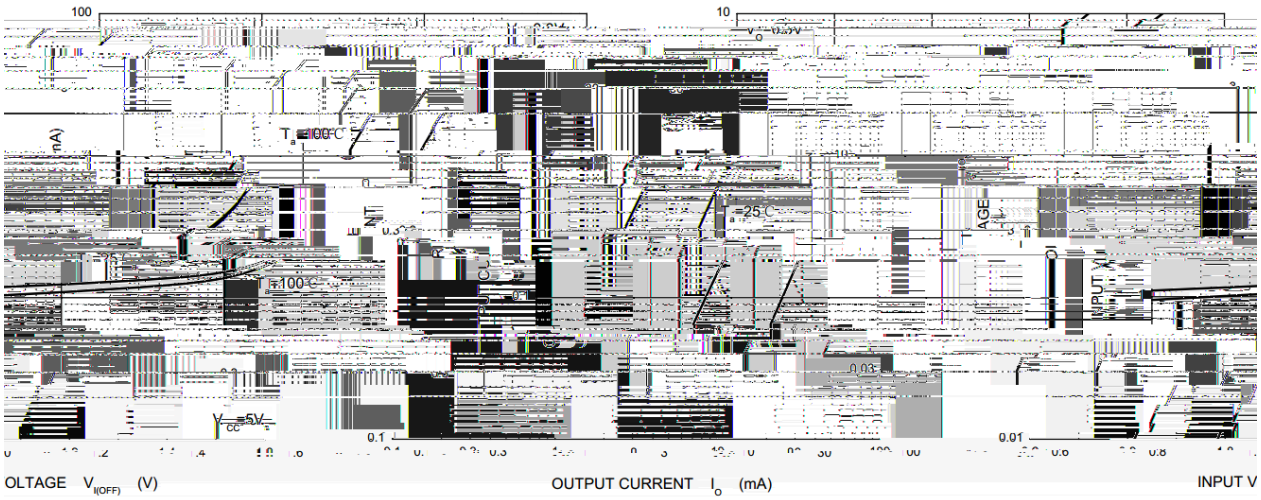
@ Parameter	Z Symbol	Rating	⅜ Unit
Supply Voltage	V_{CC}	50	V
Input Voltage	V_{IN}	-10~30	V
Output Current	I_O	100	mA
Power Dissipation	P_D	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

Ô4ì × ? d / Electrical Characteristics(Ta=25 ;)

@ Parameter	Z Symbol	⅛ Test Conditions	4 Min	″ Typ	Ý Max	⅜ Unit
Input Voltage(OFF)	$V_{I(off)}$	V_{CC}=5.0V I_O=0.1mA	0.5			V
Input Voltage(ON)	$V_{I(on)}$	V_O=0.3V I_O=20mA			3.0	V
Output Voltage	$V_{O(on)}$	I_O=10mA I_I=0.5mA		0.1	0.3	V
Input Current	I_I	V_I=5.0V			1.8	mA
Output Cut-off Current	$I_{O(off)}$	V_{CC}=50V V_I=0			0.5	A
DC Current Gain	G_I	V_O=5.0V I_O=10mA	20			
Transition Frequency	f_T	V_{CE}=10V I_E=-5.0mA f=100MHz		250		MHz
Resistance1	R_1		3.29	4.7	6.11	K
Resistance Ratio	R_2/R_1		0.8	1.0	1.2	

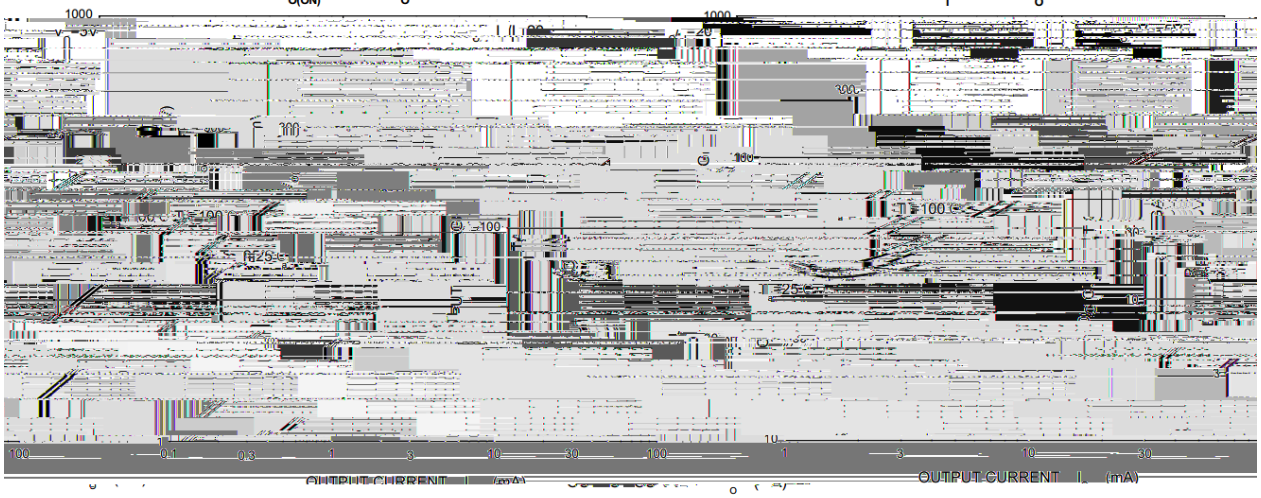
Ô ? d • Ž ¢ / Electrical Characteristic Curve

ON Characteristics



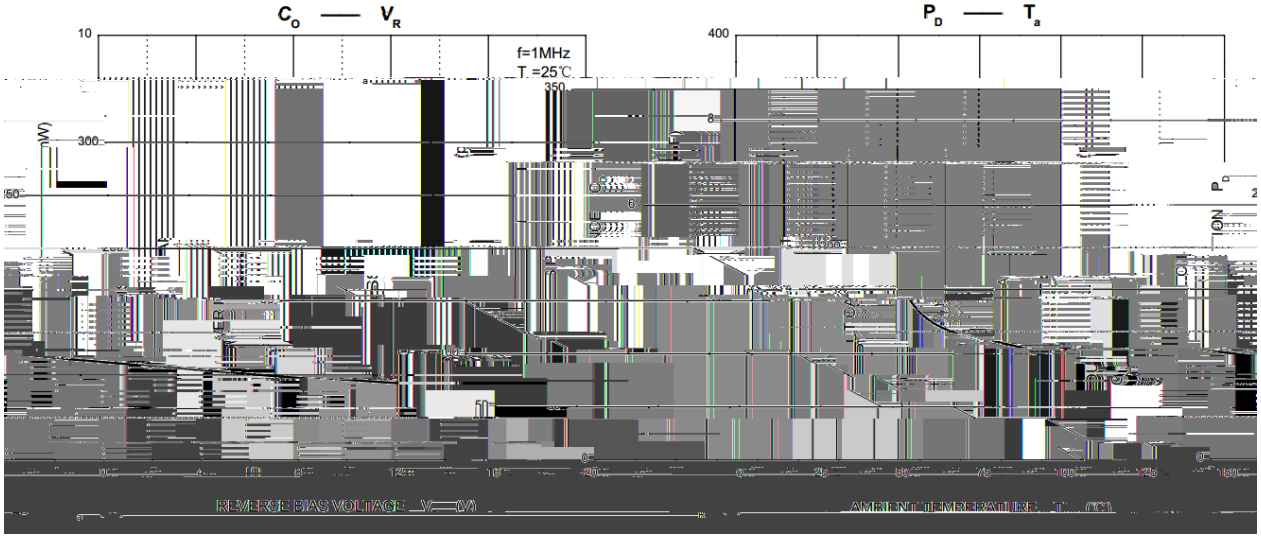
OFF Characteristics

$V_{O(ON)}$ —— I_O



G_I —— I_O

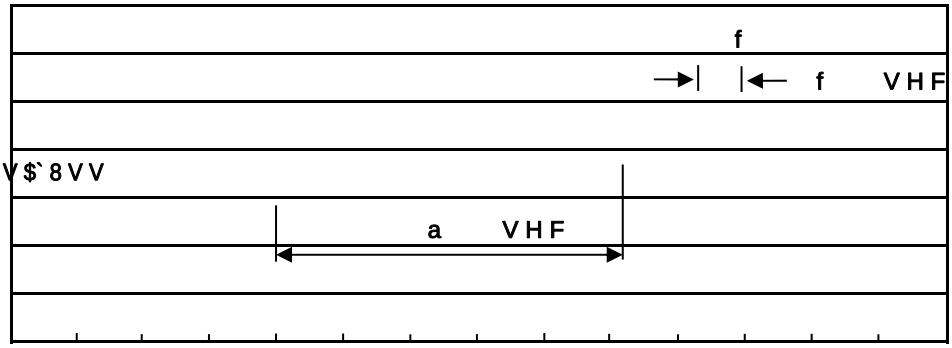
C_O —— V_R



P_D —— T_a

BRDTC143EKAQ

š WD t … • Ž ¢ (x /) / : K S V K X G Z [X K 6 X U L O R K L U X / 8 8 K L R U] 9 U R J K X O T M 6



¥			Note:
1ß	150‰ 200k	60‰ 120sec;	1.Preheating:150~200 - , Time:60~120sec.
2Q	255 r5	5 r0.5sec;	2.Peak Temp.:255 r5 - , Duration:5 r0.5sec.
3Þ	2‰ 10 - /sec.		3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

y 260 r5 - y 10 r1 sec. Temp.:260±5 Time:10±1 sec

G P á / Packaging SPEC.

& / REEL

Package Type 7>û ˜ E	Units ;>û ¦H					Dimension ;>û p . (unit Æmm³)		
	Units/Reel / --	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box×	Outer Box1ç
SOT-23	3,000	10	30,000	6	180,000	7 T×8	180×120×180	390×385×205

„ Ð y ƒ / Notices