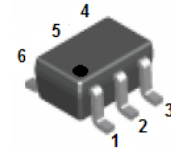
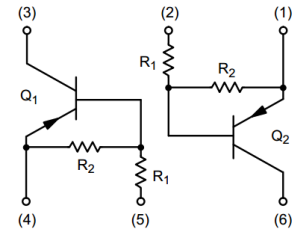


Features

- Epitaxial Planar Die Construction.
- Complementary NPN Types Available(DTC)
- Built-in Biasing Resistors, $R_1=R_2$
- Also Available in Lead Free Version
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

HF



SOT-363

Mechanical Data

- Case: SOT-363
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Matte tin plated leads, solderable per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping	Marking Code
TDTA114EDW	SOT-363	3000 pcs / Tape & Reel	14

Maximum Ratings (@ $T_A=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Value	Units
MAXIMUM RATINGS			
V_{CC}	Supply Voltage	-50	V
V_{IN}	Input Voltage	+10 to -40	V
I_O	Output Current	-50	mA
I_C	Collector Current	-100	mA
Thermal Characteristic			
P_D	Total Power Dissipation, $T_a \leq 25^{\circ}\text{C}$	150	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics (@TA=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(off)}$	$V_{CC}=-5V, I_O=-100\mu A$	-0.5	-1.1	-	V
	$V_{I(on)}$	$V_O=-0.3V, I_O=-10mA$	-	-1.9	-3	V
Output Voltage	$V_{O(on)}$	$I_O=-10mA, I_I=-0.5mA$	-	-0.1	-0.3	V
Input Current	I_I	$V_I=-5V$	-	-	-0.88	mA
Output Current	$I_{O(off)}$	$V_{CC}=-50V, V_I=0V$	-	-	-0.5	μA
DC Current Gain	G_I	$V_O=-5V, I_O=-5mA$	30	-	-	-
Input Resistor	R_1		7	10	13	k Ω
Resistance Ratio	R_2/R_1		0.8	1	1.2	-
Gain-Bandwidth Product	f_T	$V_{CE}=-10V, I_E=5mA,$ $f=100MHz$	-	250	-	MHz

Ratings and Characteristic Curves (TA=25°C unless otherwise noted)

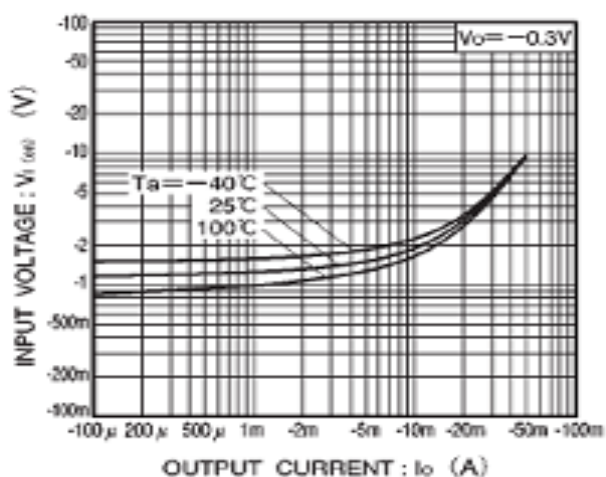


Fig.1 Input voltage vs. output current (ON characteristics)

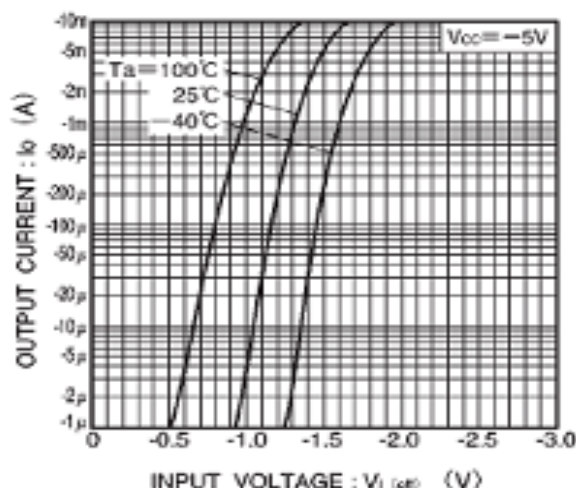


Fig.2 Output current vs. input voltage (OFF characteristics)

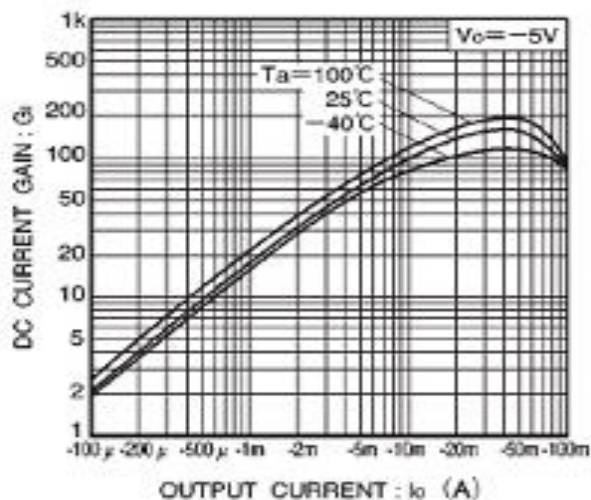
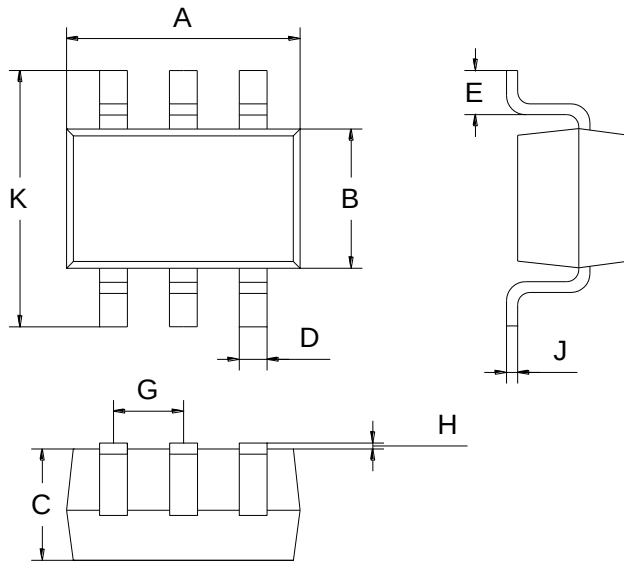


Fig.3 DC current gain vs. output current

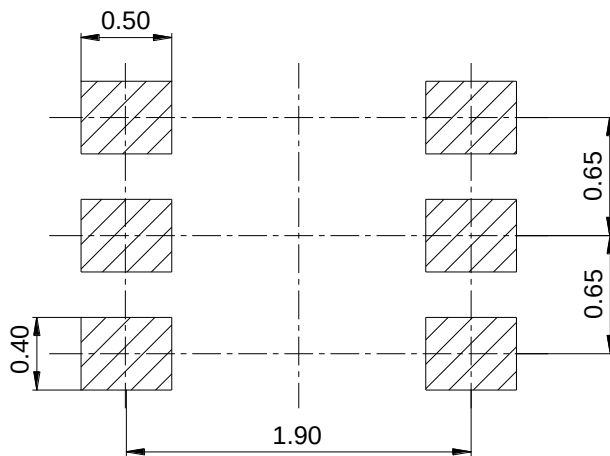
Package Outline Dimensions(unit:mm)

SOT-363



SOT-363		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.85	1.05
D	0.15	0.35
E	0.25	0.40
G	0.60	0.70
H	0.02	0.10
J	0.05	0.15
K	2.20	2.40

SOLDERING FOOTPRINT(unit:mm)



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