Elektronische Bauelemente

UMD6N

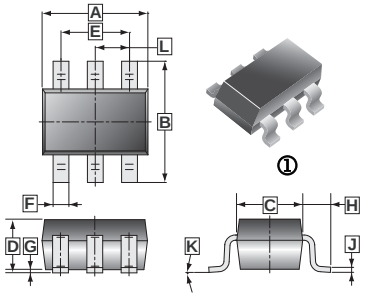
Dual NPN+PNP Digital Transistors (Built-in Resistors)

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

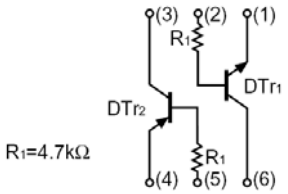
- DTA143T(PNP) and DTC143T(NPN) transistors are built-in a package.
- Transistor elements are independent, eliminating interference.
- Mounting cost and area can be cut in half.

SOT-363



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.00	2.20	G	0.100 REF.	
B	2.15	2.45	H	0.525 REF.	
C	1.15	1.35	J	0.08	0.15
D	0.90	1.10	K	8°	
E	1.20	1.40	L	0.650 TYP.	
F	0.15	0.35			

EQUIVALENT CIRCUIT



MARKING：D6

ABSOLUTE MAXIMUM RATINGS at Ta = 25°C

Parameter	Symbol	Value	Unit
Collector-base voltage	$V_{(BR)CBO}$	50	V
Collector-emitter voltage	$V_{(BR)CEO}$	50	V
Emitter-base voltage	$V_{(BR)EBO}$	5	V
Collector current	I_C	100	mA
Collector Power dissipation	P_C	150	mW
Junction & Storage temperature	T_J, T_{STG}	150, -55 ~ 150	℃

ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS at Ta = 25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	50	-	-	V	I_C= 50μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	50	-	-		I_C= 1mA
Emitter-base breakdown voltage	$V_{(BR)EBO}$	5	-	-	V	I_E= 50μA
Collector cut-off current	I_{CBO}	-	-	0.5	μA	V_{CB}= 50V
Emitter cut-off current	I_{EBO}	-	-	0.5	μA	V_{EB}= 4V
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.3	V	I_C= 5mA, I_B= 0.25mA
DC current transfer ratio	h_{FE}	100	-	600		V_{CE}= 5V, I_C= 1mA
Input resistance	R_1	3.29	4.7	6.11	KΩ	
Transition frequency	f_T	-	250	-	MHz	V_{CE}= 10V, I_E= -5mA, f=100MHz

CHARACTERISTICS CURVE

DTr1 (NPN)

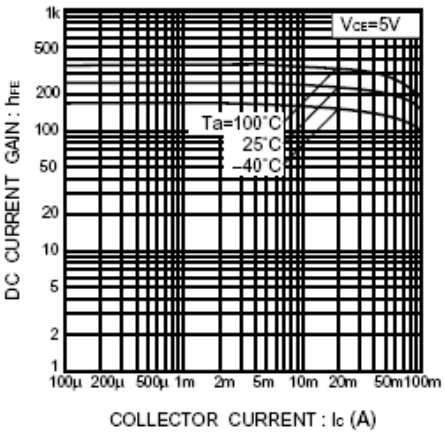


Fig.1 DC current gain vs. collector current

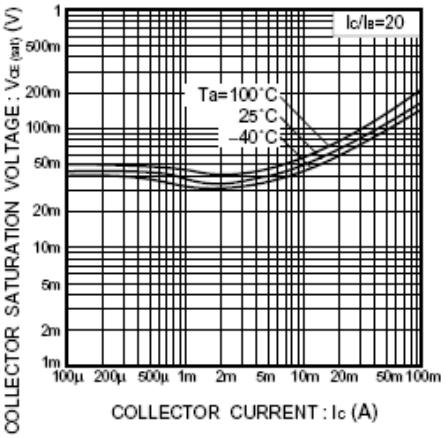


Fig.2 Collector-emitter saturation voltage vs. collector current

DTr2 (PNP)

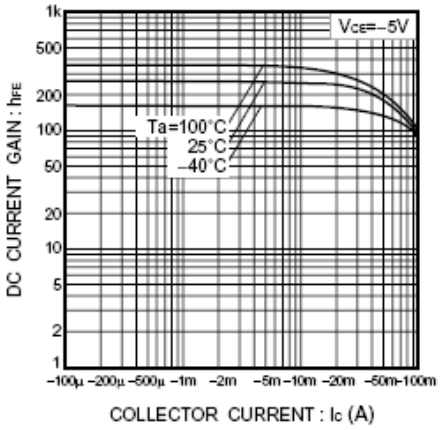


Fig.3 DC current gain vs. collector current

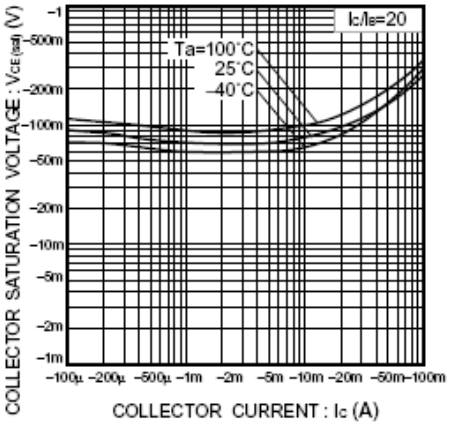


Fig.4 Collector-emitter saturation voltage vs. collector current