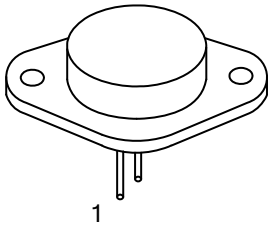
2N3773/2N6099

POWER TRANSISTOR

COMPLEMENTARY SILICON TRANSISTORS



TO-3

■ DESCRIPTION

The UTC **2N3773/2N6099** are complement silicon power transistors designed for high power audio, disk head positions and other linear applications. These device can be used in power switching circuits such as relay or solenoid drivers, DC to DC converters or inverts.

■ FEATURES

* Complement Characterized for linear operation
* High DC Current Gain and low saturation voltage
  h_{FE}>15(8A, 4V)
  $V_{CE(SAT)}$<1.4V(I_C=8A, I_B=0.8A)
* For Low Distortion Complementary Designs

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2N3773L-T30-Y	2N3773G-T30-Y	TO-3	B	E	C	Tray
2N6099L-T30-Y	2N6099G-T30-Y	TO-3	B	E	C	Tray

2N3773L-T30-Y
(1)Packing Type
(2)Package Type
(3)Lead Free

(1) Y: Tray
(2) T30: TO-3
(3) G: Halogen Free, L: Lead Free

■ ABSOLUTE MAXIMUM RATING (T_A=25℃, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	160	V
Collector-Emitter Voltage		V_{CEO}	140	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector-Emitter Voltage		V_{CEX}	160	V
Power Dissipation	T_C=25℃	P_C	150	W
	Dertate Above 25℃		0.855	W/℃
Collector Current	Continuous	I_C	16	A
	Peak		30	A
Base Current	Continuous	I_B	4	A
	Peak		15	A
Junction Temperature		T_J	150	℃
Storage Temperature		T_{STG}	-55 ~ +150	℃

Note: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.
2. Pulse Test: P_W<=5ms, Duty Cycle<=10%

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ_{JC}	1.17	℃/W

■ ELECTRICAL CHARACTERISTICS (T_A=25℃, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=0.2A, I_B=0	160			V
Collector-Emitter Sustaining Voltage	BV_{CEX}	I_C=0.1A,$V_{BE(OFF)}$=1.5V, R_{BE}=100Ω	160			V
Collector-Emitter Sustaining Voltage	BV_{CER}	I_C=0.1A, R_{BE}=100Ω	150			V
Collector Cut-off Current	I_{CBO}	V_{CB}=140V, I_E=0			2	mA
Emitter Cut-off Current	I_{EBO}	V_{BE}=7V, I_C=0			5	mA
Collector Cut-off Current	I_{CEX}	V_{CE}=140V,$V_{BE(OFF)}$=1.5V		2		mA
		V_{CE}=140V,$V_{BE(OFF)}$=1.5V,T_C=150℃		10		mA
ON CHARACTERISTICS						
DC Current Gain (Note)	h_{FE1}	V_{CE}=4V, I_C=8A	15		60	
	h_{FE2}	V_{CE}=4V, I_C=16A	5			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=8A, I_B=800mA			1.4	V
		I_C=16A, I_B=3.2A			4	V
Base-Emitter Saturation Voltage	$V_{BE(ON)}$	I_C=8A, V_{CE}=4V			2.2	V
DYNAMIC CHARACTERISTICS						
Small Signal Current Gain	h_{FE}	I_C=1A, V_{CE}=4V, f=1kHz	40			
Magnitade Of Commom-Emitter Small Signal, Short Circuit Forward Current Transfer Ratio	$\|h_{FE}\|$	I_C=1A, f=50kHz	4			
Second Breakdown Collector With Base Forward Biased	I_S/b	t=1s(non-repetive), V_{CE}=100V	1.5			A

Note: Pulse Test: P_W<=300μs, Duty Cycle<=2%