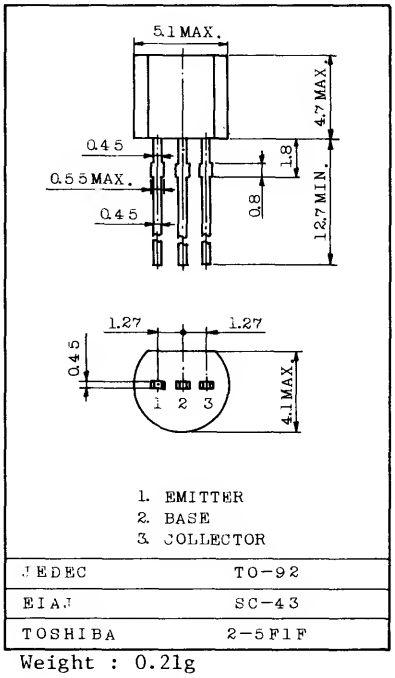
FOR GENERAL PURPOSE USE SWITCHING AND AMPLIFIER APPLICATIONS.

FEATURES:

. Low Leakage Current
  : I_{CEV}=50nA(Max.), I_{BEV}=-50nA(Max.)
  @ V_{CE}=30V, V_{BE}=-3V
. Excellent DC Current Gain Linearity
. Low Saturation Voltage
  : $V_{CE(sat)}$=0.3V(Max.) @ I_C=50mA, I_B=5mA
. Low Collector Output Capacitance
  : C_{ob}=4pF(Max.) @ V_{CB}=5V
. Complementary to 2N3905

Unit in mm



1. EMITTER
2. BASE
3. COLLECTOR

JEDEC	TO-92
EIAJ	SC-43
TOSHIBA	2-5F1F

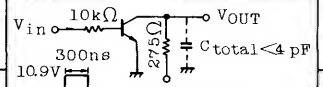
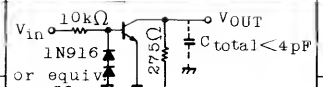
Weight : 0.21g

MAXIMUM RATINGS (Ta=25°C)

	CHARACTERISTIC	SYMBOL	RATING	UNIT
※	Collector-Base Voltage	V_{CBO}	60	V
※	Collector-Emitter Voltage	V_{CEO}	40	V
※	Emitter-Base Voltage	V_{EBO}	6	V
※	Collector Current	I_C	200	mA
	Base Current	I_B	50	mA
※	Collector Power Dissipation (Ta=25°C) Derate Linearly 25°C	P_C	350	mW
			2.8	mW/°C
※	Collector Power Dissipation (Tc=25°C) Derate Linearly 25°C	P_C	1.0	W
			8	mW/°C
※	Thermal Resistance (Junction to Ambient)	$R_{th(j-a)}$	357	°C/W
※	Thermal Resistance (Junction to Case)	$R_{th(j-c)}$	125	°C/W
※	Junction Temperature	T_j	150	°C
※	Storage Temperature Range	T_{stg}	-55 ~ 150	°C

※In accordance with JEDEC registration data.

ELECTRICAL CHARACTERISTICS (Ta=25°C)

	CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
※	Collector Cut-off Current		I_{CEV}	V_{CE}=30V, V_{BE}=-3V	-	-	50	nA
※	Base Cut-off Current		I_{BEV}	V_{CE}=30V, V_{BE}=-3V	-	-	-50	nA
※	Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	I_C=10μA, I_E=0	60	-	-	V
※	Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=1mA, I_B=0	40	-	-	V
※	Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	I_E=10μA, I_C=0	6	-	-	V
※	DC Current Gain		$h_{FE(1)}$	V_{CE}=1V, I_C=0.1mA	20	-	-	
			$h_{FE(2)}$	V_{CE}=1V, I_C=1mA	35	-	-	
			$h_{FE(3)}$	V_{CE}=1V, I_C=10mA	50	-	150	
			$h_{FE(4)}$	V_{CE}=1V, I_C=50mA	30	-	-	
			$h_{FE(5)}$	V_{CE}=1V, I_C=100mA	15	-	-	
※	Collector-Emitter Saturation Voltage		$V_{CE(sat)1}$	I_C=10mA, I_B=1mA	-	-	0.2	V
			$V_{CE(sat)2}$	I_C=50mA, I_B=5mA	-	-	0.3	
※	Base-Emitter Saturation Voltage		$V_{BE(sat)1}$	I_C=10mA, I_B=1mA	0.65	-	0.85	V
			$V_{BE(sat)2}$	I_C=50mA, I_B=5mA	-	-	0.95	
※	Transition Frequency		f_T	V_{CE}=20V, I_C=10mA f=100MHz	250	-	-	MHz
※	Collector Output Capacitance		C_{ob}	V_{CB}=5V, I_E=0, f=1MHz	-	-	4	pF
※	Input Capacitance		C_{ib}	V_{EB}=0.5V, I_C=0, f=1MHz	-	-	8	pF
※	Input Impedance		h_{ie}	V_{CE}=10V, I_C=1mA f=1kHz	0.5	-	8	kΩ
※	Voltage Feedback Ratio		h_{re}		0.1	-	5	×10⁻⁴
※	Small-Signal Current Gain		h_{fe}		50	-	200	
※	Collector Output Admittance		h_{oe}		1	-	40	μS
※	Noise Figure		NF	V_{CE}=5V, I_C=0.1mA R_g=1kΩ, f=10Hz～15.7kHz	-	-	6	dB
※	Switching Time	Delay Time	t_d		-	-	35	ns
		Rise Time	t_r		-	-	35	
		Storage Time	t_{stg}		-	-	175	
		Fall Time	t_f		-	-	50	

※ In accordance with JEDEC registration data.