

TA78DS05P, TA78DS10P

BIPOLAR LINEAR INTEGRATED CIRCUIT
SILICON MONOLITHIC

o 5V, 10V LOW DROPOUT VOLTAGE REGULATOR

The TA78DS05P and TA78DS10P are three terminal regulator of 30mA max. output current.

For the low standby current, the TA78DS05P and TA78DS10P are designed for use in low dropout voltage regulator and backup voltage regulator in memory.

- Low standby current : 500 μ A (Typ)
- Max output current : 30mA (Max)
- Low Input - Output voltage : 0.3V (Max)
- Multi Protection :

Power Supply reverse connection

60V Road Dump

Thermal protection

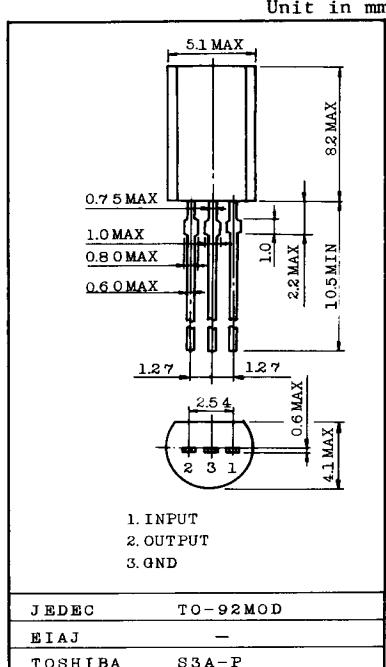
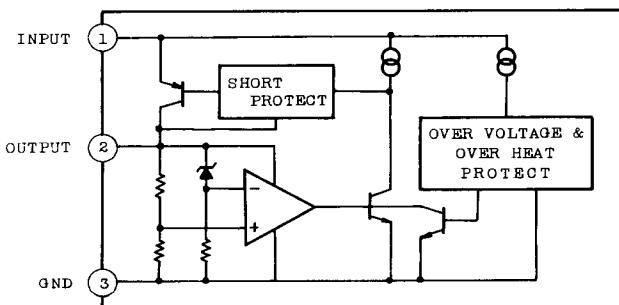
Short protection

Package : TO-92 MOD

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Operating Input Voltage	V _{IN}	29	V
Input Voltage	V _{IN}	60	V
Power Dissipation	P _D	800	mW
Operating Temperature	T _{opr}	-40 ~ 85	°C
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 ~ 150	°C
Lead Temp. · Time	T _{sol}	260 (10sec)	°C

BLOCK DIAGRAM



ELECTRICAL CHARACTERISTICS $V_{IN}=14V$, $I_{OUT}=5mA$, $T_j=25^\circ C$

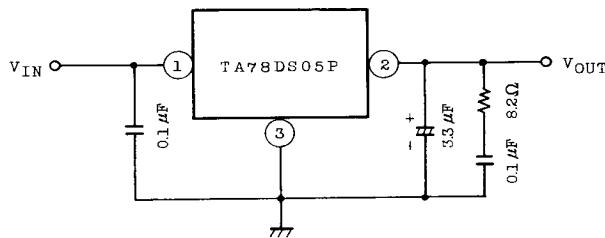
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN	TYP	MAX	UNIT
Output Voltage	V_{OUT}	-	$V_{IN}=5.35 \sim 26V$, $T_a=-40 \sim 85^\circ C$	4.5	5	5.5	V
Voltage Change	$\Delta V_{OUT}(1)$	-	$V_{IN}=9 \sim 16V$	-	2	10	mV
			$V_{IN}=6 \sim 26V$	-	4	30	
Load Change	$\Delta V_{OUT}(2)$	-	$I_{OUT}=5 \sim 30mA$	-	14	50	
Supply Current	I_{CC}	-	$I_{OUT} \leq 5mA$, $V_{IN}=6 \sim 26V$	-	0.5	1	mA
Input-Output Voltage	V_{DROP}	-	$I_{OUT}=5mA$	-	0.1	0.2	V
			$I_{OUT}=10mA$	-	0.2	0.3	
Max. Operating Input Voltage	V_{IN}	-		29	33	-	

TA78DS10P

ELECTRICAL CHARACTERISTICS ($V_{IN}=14V$, $I_{OUT}=5mA$, $T_j=25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN	TYP	MAX	UNIT
Output Voltage	V_{OUT}	-	$V_{IN}=10.35 \sim 26V$, $T_a=-40 \sim 85^\circ C$	9	10	11	V
Voltage Change	$\Delta V_{OUT}(1)$	-	$V_{IN}=14 \sim 21V$	-	4	20	mV
			$V_{IN}=11 \sim 26V$	-	8	60	
Load Change	$\Delta V_{OUT}(2)$	-	$I_{OUT}=5 \sim 30mA$	-	28	100	mA
Supply Current	I_{CC}	-	$I_{OUT} \leq 5mA$, $V_{IN}=11 \sim 26V$	-	0.7	-	mA
Input-Output Voltage	V_{DROP}	-	$I_{OUT}=5mA$	-	0.1	0.2	V
			$I_{OUT}=10mA$	-	0.2	0.3	
Max. Operating Input Voltage	V_{IN}	-		29	33	-	

APPLICATION CIRCUIT



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