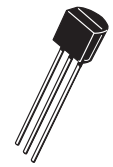
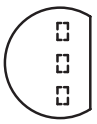
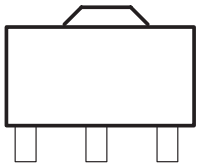
- **3-Terminal Regulators**
- **Output Current up to 100 mA**
- **No External Components**
- **Internal Thermal-Overload Protection**
- **Internal Short-Circuit Current Limiting**
- **Direct Replacements for Fairchild μA78L Series**







description

This series of fixed-voltage integrated-circuit voltage regulators is designed for a wide range of applications. These applications include on-card regulation for elimination of noise and distribution problems associated with single-point regulation. In addition, they can be used with power-pass elements to make high-current voltage regulators. One of these regulators can deliver up to 100 mA of output current. The internal limiting and thermal-shutdown features of these regulators make them essentially immune to overload. When used as a replacement for a zener diode-resistor combination, an effective improvement in output impedance can be obtained, together with lower bias current.

electrical characteristics at specified virtual junction temperature, V_I = otherwise noted)

PARAMETER	TEST CONDITIONS	T ‡				UNIT
			MIN	TYP	MAX	
Output voltage		25°C				V
		Full range				
	I_O = 1 mA to 70 mA	Full range				
Input voltage regulation	V_I =	°				
	V_I =					
Ripple rejection	V_I = f = 120 Hz	25°C				dB
Output voltage regulation	I_O = 1 mA to 100 mA	°				
	I_O = 1 mA to 40 mA					
Output noise voltage	f = 10 Hz to 100 kHz	25°C				μV
Dropout voltage		25°C				V
		25°C				
		125°C				
Bias current change	V_I =	range			1.5	
	I_O = 1 mA to 40 mA				0.1	

‡ Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately. All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Full range for the 78L05 is T_J = 0°C to 70°C

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		UNIT
Input voltage, V_I		V
Virtual junction temperature range, T_J	150	°C
Lead temperature 1,6 mm (1/16 inch) from case for 10 seconds	260	°C
Storage temperature range, T_{stg}	–65 to 150	°C

	MIN	MAX	UNIT
Input voltage, V_I			
Output current, I_O		100	mA
Operating virtual junction temperature, T_J	0		°C